

NARROW GAUGE AND SHORT LINE GAZETTE

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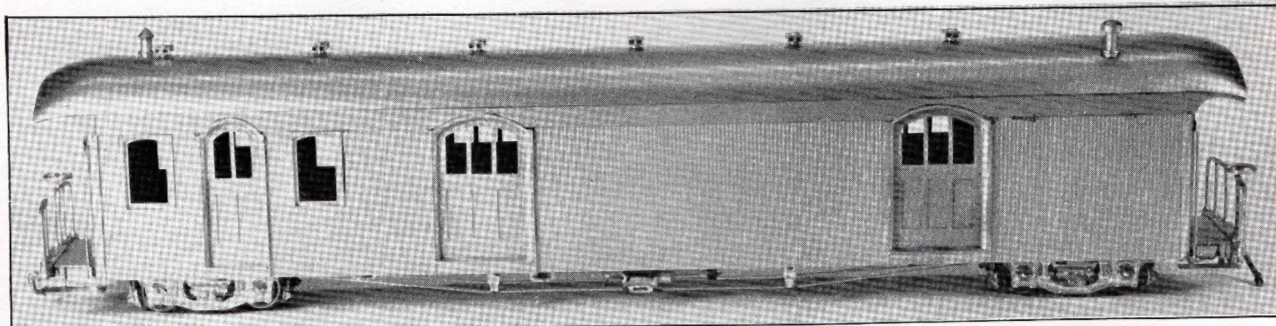
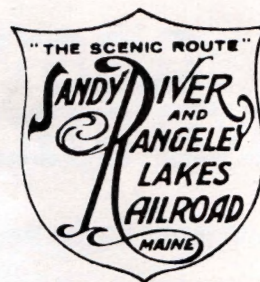


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On 2



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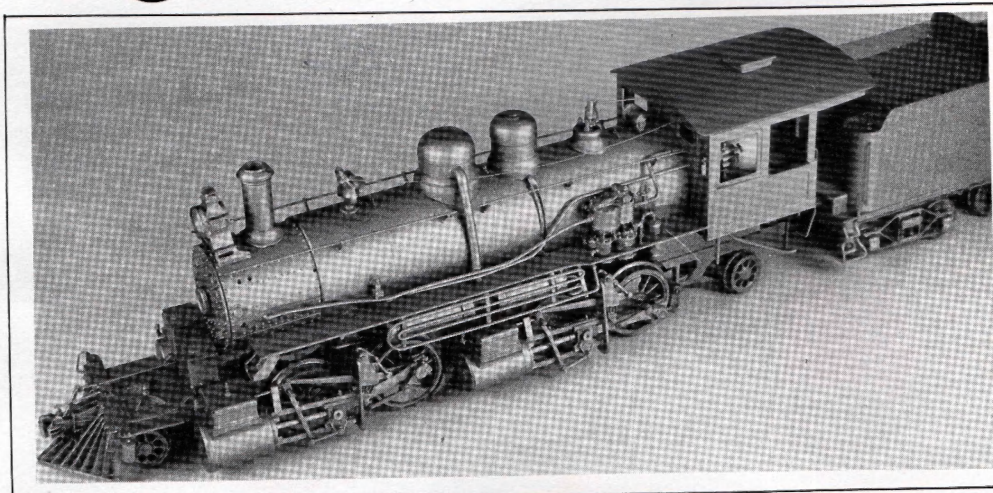
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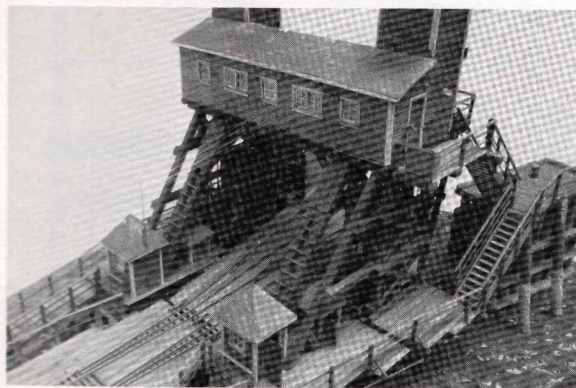
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March/April, 1978

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COVER

Building a contest model is really a labor of love. Brian Pate built this prizewinning HO standard gauge ferry slip. The model took a first place at the NMRA convention in Denver, Colorado, in 1977. As you read Brian's description of his model in this issue notice his attention to detail and the beautiful finish of his structure.

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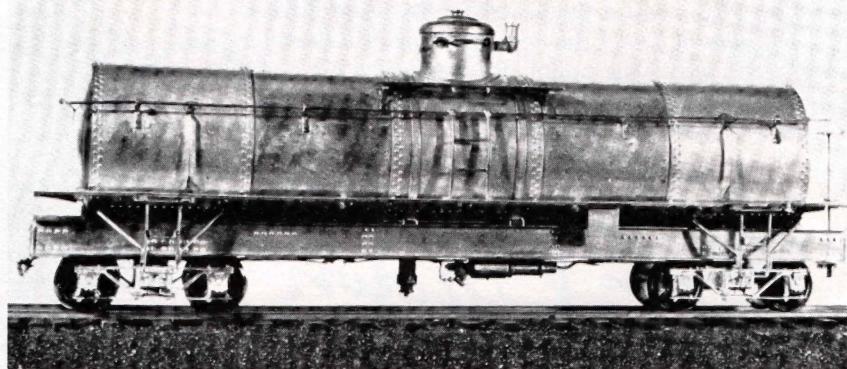
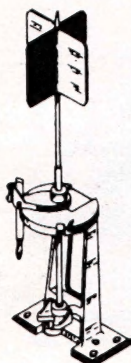
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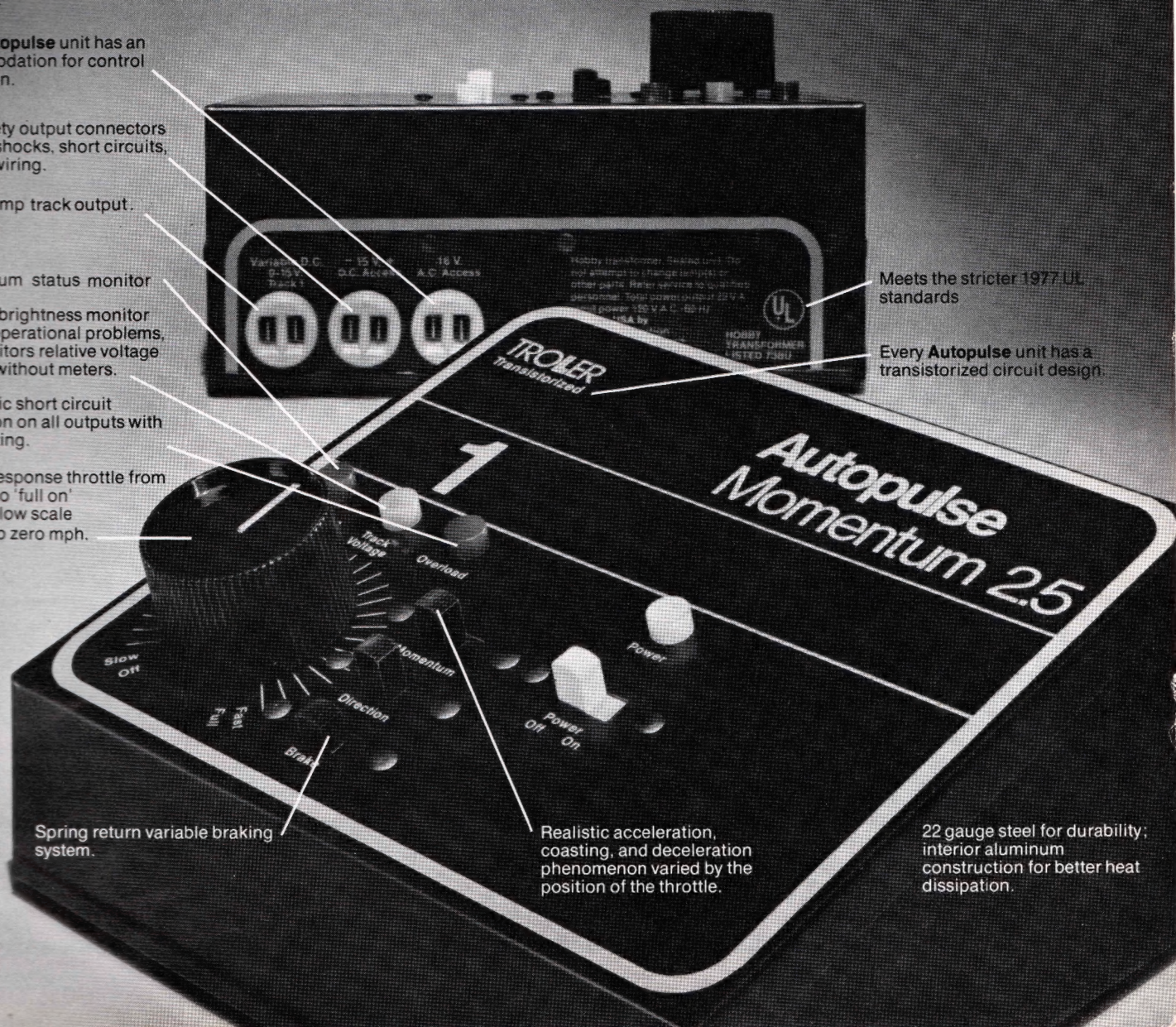
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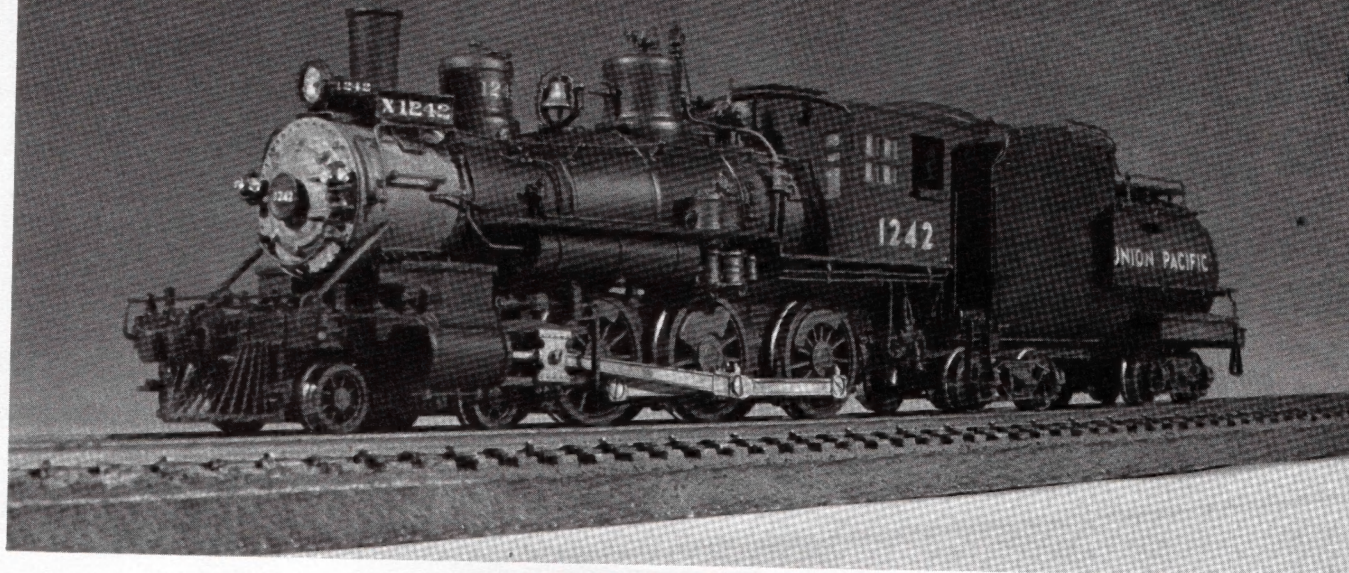
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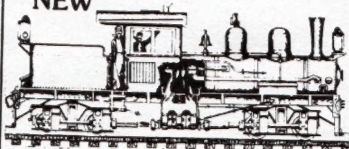
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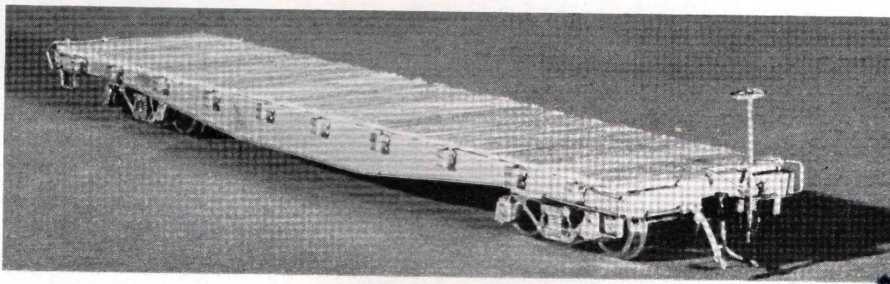
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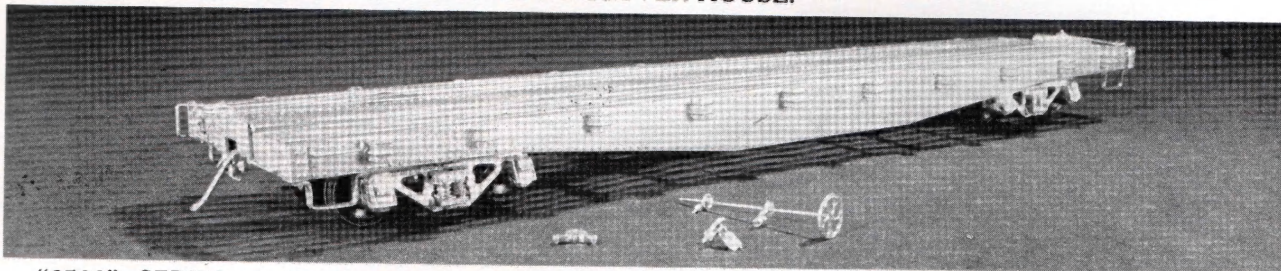
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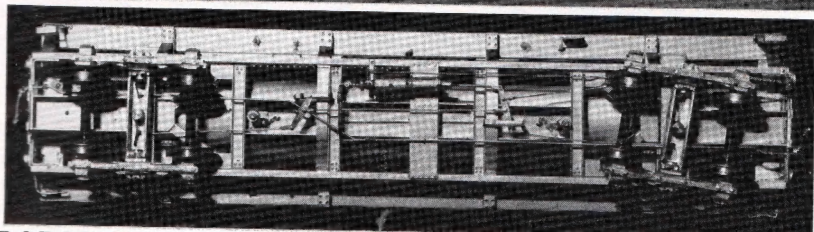
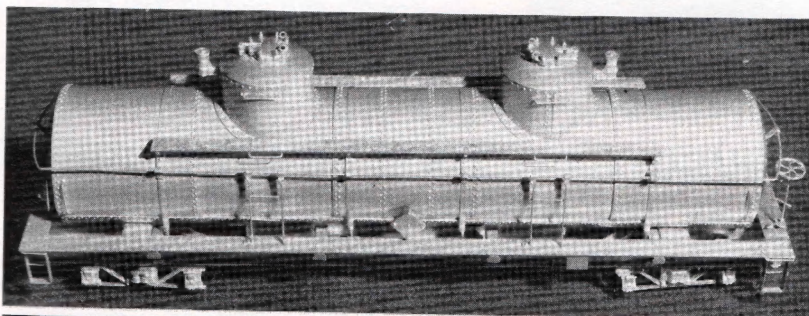
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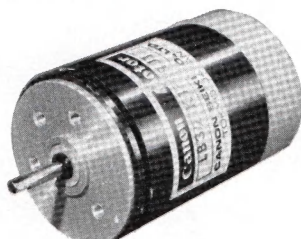
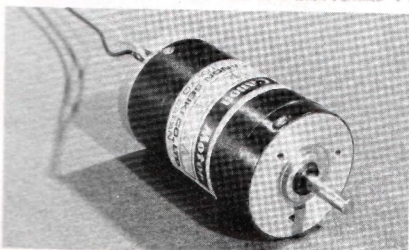


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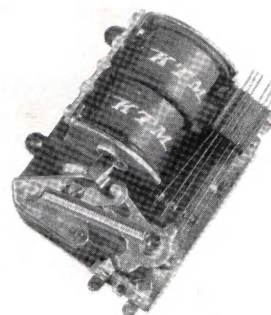


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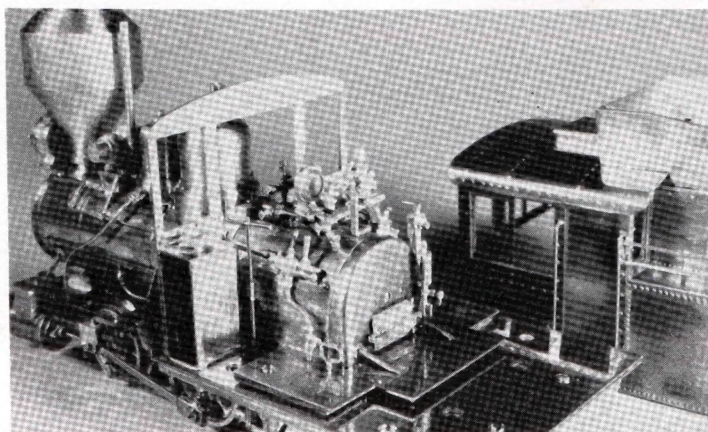
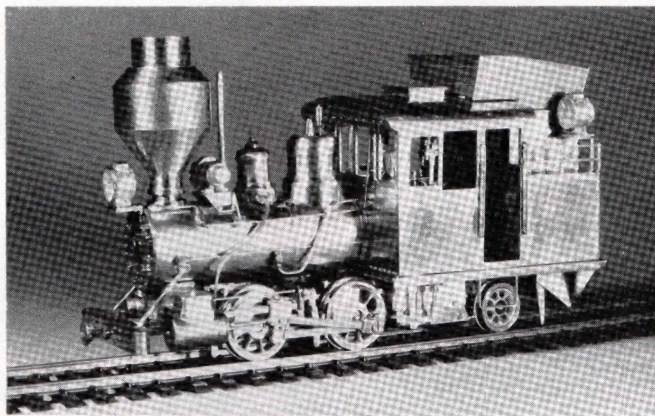
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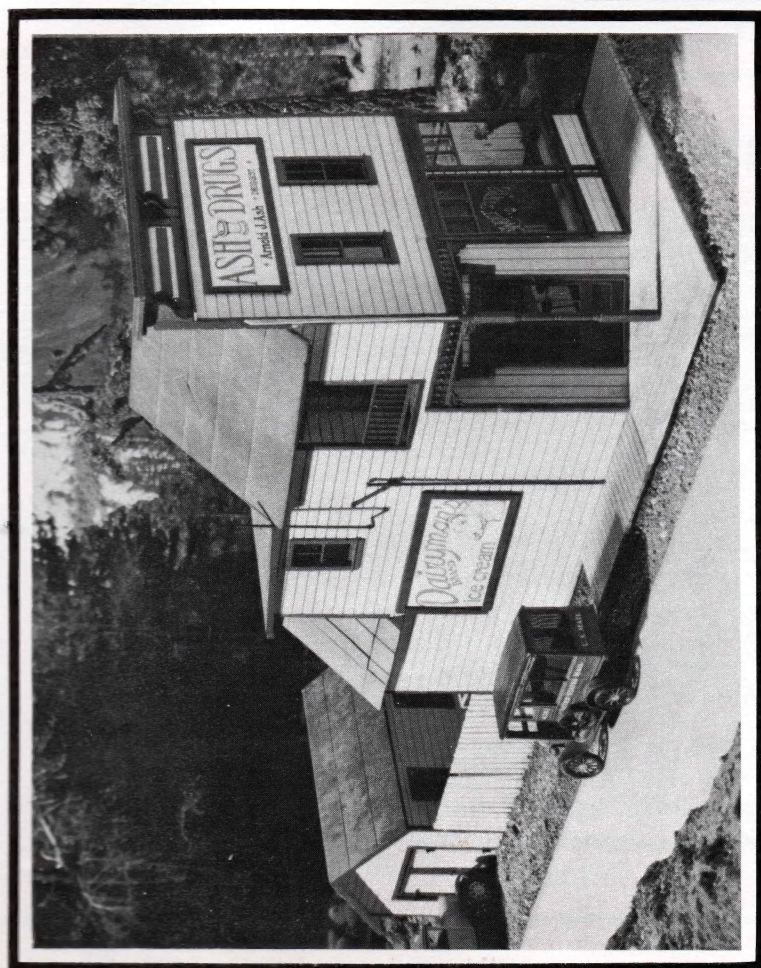
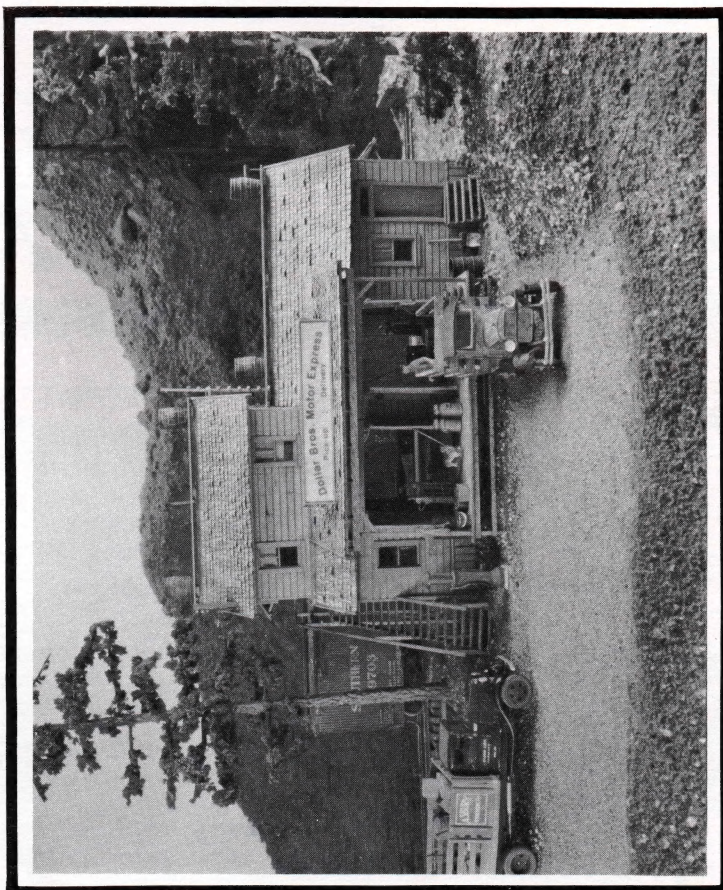
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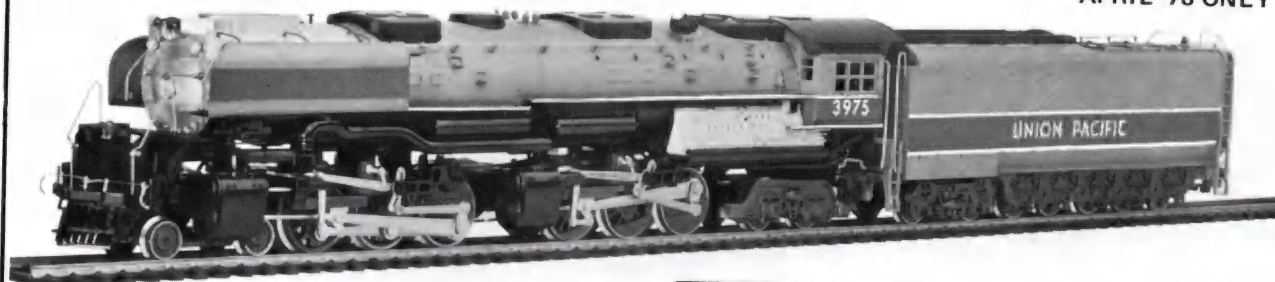
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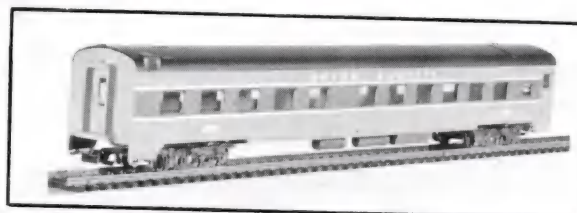
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the CASEY JONES railbus

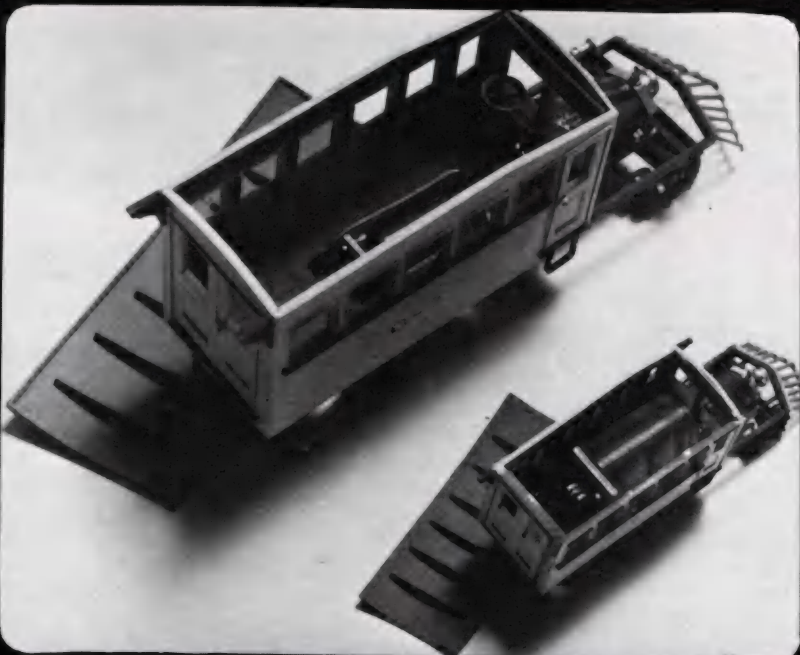
O_{n3} & H₀O_{n3}

Pictured here are 'prototype models' John Hermann built with Pewter Castings struck from molds made of the Master Patterns he created. Both the O scale and H0 scale miniature 'Railbuses' rival the workmanship he displayed on the J. I. Case TRACTION ENGINE, also rendered in both scales.

While the O scale version has a few more parts than the H0, each is as detailed as any builder could want. Working from available printed data and a fantastic set of photos showing the full size prototype done specially for this project. They are, incidentally, used in the extensive Plan-Instruction book that is issued with each 'Limited Run' kit we have planned to make for you.

Each numbered kit in O scale, just 300, and each of the 600 kits in H0 scale will host some other specially created mementos of Otto Mears most famous 'short line' to the Gold and Silver mines around Silverton, Colorado.

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'Limited Run' legally defines as that which can no longer be produced. When all of the planned kits in either or both scales are fully subscribed we shall turn over our Master Patterns, Photos, Printing Plates, Master Molds, Production Molds and other material required here to make your kit to our CPA firm for full and total destruction. A 'Certificate' attesting to that, signed and properly Notarized shall be then included in each kit delivered from here to your purveyor of things 'Narrow Gauge'. Not less than the mentioned quantity nor more than that quantity shall be produced.

The O scale kit is \$157.69 and the H0 scale is \$89.98. Both are powered by a 'Flea' type drive unit specially made for this miniature.

NOTE: The next issue of the GAZETTE will feature color photos of the model, as promised in our MR display ad for March. Just didn't have time to get the kind of quality color separations you deserve to have in this fine publication.

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NEW in REVIEW

HOn3 Three-Truck Shay
Westside Model Company
3085 Carriker Lane
Soquel, CA 95073

The West Side Lumber Company #8, a three-truck Shay, is the latest HOn3 locomotive from Westside Model Company. The model was built in Japan by the Nakamura Seimitsu Company.

Lima built the prototype for West Side Lumber #8 in 1922. At 154,400 pounds, this narrow gauge Shay was large but not the largest on the West Side roster. The prototype survived its owner, ending up at a museum in Banks, Oregon. The museum has closed and the present location of this locomotive is not known to this reviewer.

The model is neatly built with little excess solder evident. The super-

structure is fabricated primarily from etched brass, detailed with numerous sharp coinings and excellent lost-wax castings. The precision of assembly on the model reviewed is good. The piping is accurately formed and fitted to the superstructure. The overall workmanship is as good if not better than that on Nakamura's K-36 imported by Westside last year. The model appears to have all visible details which this reviewer observed in

photos of the prototype. You will even find the "leather" safety strap across the engineer's cab window.

The model scales out very closely to the data found on the Lima builder's card. The overall locomotive wheelbase is just two scale inches over what it should be. That is darn close in any scale. The boiler diameter is very close to correct scale size. Nakamura has captured the feel of the big #8 very well.

The truck sideframes are very good coinings which have been nickel-plated. The sideframe has a delicate appearance when viewed from the side. The drivers have zamac centers and nickel-plated tires. The non-gear-ed side are spoked centers. The zamac ring gears mesh well with the brass pinion gears. The truck drive train is



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O
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Ridgway
CAR SHOPS

Ridgway Car Shops

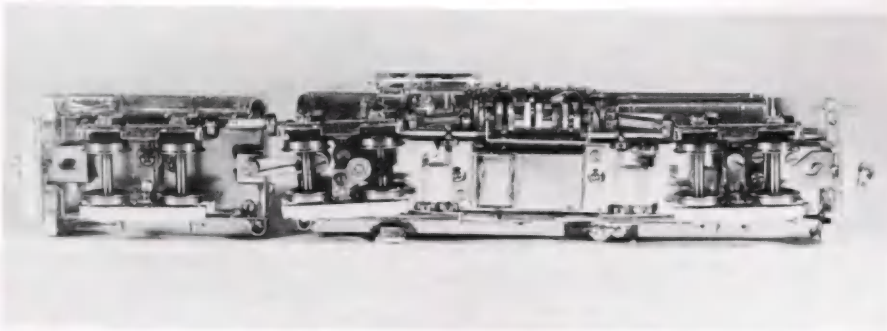
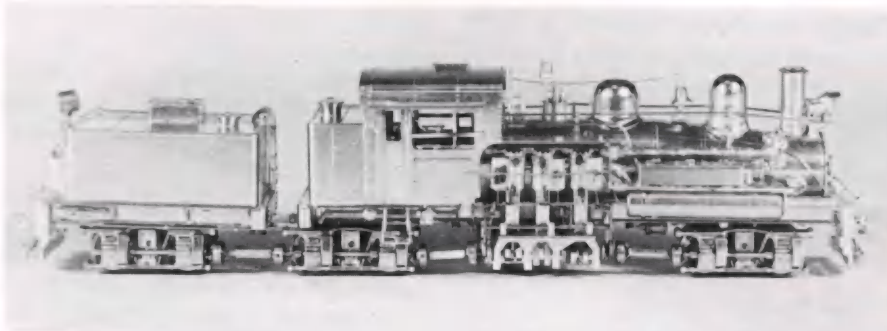
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connected together with a set of fabricated universal joints and splined shafts. The splined shafts are insulated with clear plastic shrink tubing. This allows the various trucks to pick up power on opposite rails. The shrink tubing was not thick enough on some of the models imported so the joints slip. If your model does this, go buy some shrink tubing (thin walled) at your local electronics supply house. Slip the tubing over the shaft and apply indirect heat from a soldering iron until the tubing conforms to the shape of the square spline.

The whole powertrain operates very smoothly with little noise even at full power. The observed scale speed ranged from a low of 0.5 mph to approximately 40 mph at 12 volts. While the top speed is excessive for a Shay, the overall range of control available with even the most basic of solid-state throttles is excellent. The locomotive starts smoothly with no hesitations or motor-cogging. The motor and geartrain are responsible for the excellent overall performance.

The ironless armature motor with a 30:1 gearhead provides the locomotion. The motor is mounted in the boiler, driving back through helical and spur gear combinations and down



to the number two truck. The gear-train does permit the model to coast a bit even when the power is shut off.

The model comes equipped with scale coupler pockets which are removable with one screw. Kadec couplers can be mounted easily once the scale pockets are removed. If you decide to disassemble your model for painting or service, make sure you remove only the four slotted pan-head screws. Don't remove any of the Phillips screws until you have the boiler off. If you do, you'll end up with something floating around inside the boiler.

Westside Models has included a package of white metal castings prepared by Scale Structures Ltd. You get some hand tools, figures, and a large umbrella.

In summary, the Westside Shay is very good. The \$330 price is commensurate with the smooth performance and fine detailing. *Gene Deimling.*

Two Foot Gauge Loco

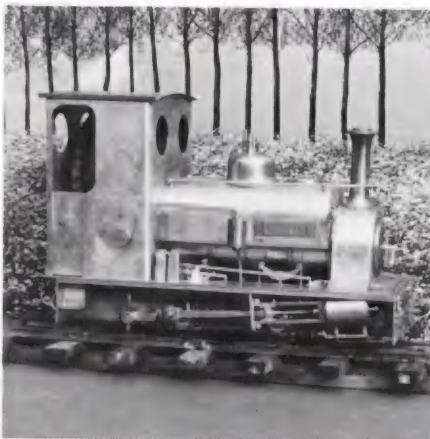
Tetie Engineering
30 Anne Boleyn's Walk
Cheam Village, SUTTON,
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England

Last summer one of the highlights of our trip to England was our five day stay with Mike and Jane South. Mike is the editor of our sister narrow gauge publication **THE MERIONETH MERCURY** (see Nov. 1977 "New In Review" in the **GAZETTE**). While we were with the Souths I was thoroughly

indoctrinated into the mysteries and joys of 16 mm scale. 16 mm scale is almost exactly $\frac{5}{16}$ th inch scale so a two-foot gauge locomotive runs on 0 track.

Mike has engaged in a custom building venture with a professional model builder to produce a limited run of custom built 16 mm scale two foot gauge locomotives. I brought one back with me to paint for Mike. Mike wishes to sell this locomotive, and as a favor to him, I am acting as his agent in the U.S. for this one locomotive only. I will forward on any additional orders to Mike after this one is sold.

The model is an 0-4-0 T Hunslet saddle tanker which ran in the quarries of Wales. It is a masterpiece and is totally hand made. I believe the only castings are for the cast iron wheels. The locomotive is built up out of sheet nickle silver and has a brass frame. The domes, boiler front door, tank access lid, lubricators and cab interior details are all brass turnings or fabrications of the highest workmanship. The stack



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has a copper cap on it. The round windows have separate brass window frames with pre-cut round glass. There are lift bars for U.S. style couplers. The number and name plates are beautiful photoengravings. It is coincidental that the locomotive is named Michael (narcissim?) The springs are individually laminated and all the valve gear, links and eccentrics are between the frames and work. The loco is made up of components which come off for easy painting. The cab is fully detailed including a 16 mm engineer of a decidedly scruffy appearance. The deck has several details such as oil cans and tool boxes. The model has a Maxon motor with a steel worm and brass gear. It runs well and will crawl realistically. The loco is just under eight inches long, is 3½ inches wide and stands about six inches high. This model is an outstanding piece of custom building of an unusual prototype. Each locomotive sells for \$1850.00. Contact me c/o the **GAZETTE** if you are interested. *Bob Brown.*

HO Leadville House

Classic Miniatures

390 Freeport Boulevard, No. 10
Sparks, Nevada 39431

This is a really nice kit! And as you can see from the photograph, it creates a nice Victorian house, using first-class materials.

The "Leadville House" contains good quality color-coded wood, paper templates; Grandt styrene window-door-detail castings; Campbell shingles; and etched brass roof trim. Two large pages of instructions/plans cover each construction step in clear language with lots of detail drawings.

I was able to assemble my kit in only a week of evenings. By far the most tedious steps were cutting out the wall assemblies using the paper templates, and shingling the roof sections. The instructions recommend that you construct the mansard roof prior to shingling, but this does make

shingle application difficult. I'd suggest you shingle the cards first but, leave enough material on the ends to overlap the next section.

All the parts fit beautifully and I was really pleased with the results. I think you will be too. Order kit No. CM-2 at \$18.00. *Charlie Getz*

"The Rock"

Fine Scale Miniatures

49 Main Street

Peabody, Massachusetts 01960

The latest HO release from FSM is a real dandy; a genuine rock bunker with all the attendant conveyor machinery. It is a complex-looking monster sure to attract comment.

Luckily, the kit is well designed, and the complex whole is broken into a number of simple components. Further, each sub-assembly is bagged separately to aid in identification of parts. The kit contains a quantity of fuzz-free wood, partly color-coded; cardstock roof templates; a box full of high-quality metal detail castings; and excellent large-format instruction-plan sheets. Separate sheets are included for ground cover instructions, shingling, and new foundation instructions. Much to FSM's credit, they changed the foundation design when it became apparent that the original foundation would not be satisfactory.

The castings provide all the conveyor detail as well as attendant barrels, trash boxes, and interior for the office. Excellent coloration suggestions are provided.

Colin Emmerson who assembled the sample shown in the photograph, reports no problems in assembly. The instructions are quite comprehensive, and if you approach each sub-assembly as a separate project, a neat job will result. Templates, isometric drawings and sketches ease assembly. Colin does suggest that you deviate from the instructions and attach a cast

handrail support on each side of the upper platform and one in the middle, followed by the handrail itself. This will allow you to attach the additional supports in a straight line and insure that all will be vertical.

My sole complaint about this kit is a person observation about the design—something just hits me wrong about it, especially the elevated shanty and open bins. Most bunkers had covered bins to protect the conveyor mechanism and the products from the elements. Of course, you are free to enclose the upper portion of your kit if you desire, and I'll probably do this on mine. It does hide more of the detail but overall looks more prototypical. Please note that these comments are my personal observation on the design and are not meant to reflect on the excellent quality of the kit. The kit is based on H.C. Quick's article in the October-November 1954 **MODEL RAILROADER**, and on a real bunker in Los Nietos, California, which featured open bins, but even here, some bins were covered to protect cement and bulk insulation.

Overall, this is a superb kit of a most interesting structure, and a good place to park all those Megow hoppers. Kit 165 is well worth the \$38.95 price. *Charlie Getz*

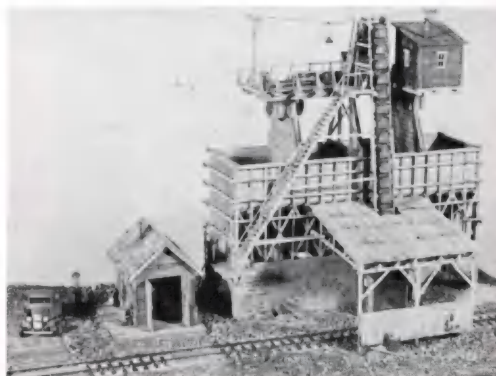
On3 D&RGW K-28

Sunset Models

19986 Mallory Court
Saratoga, CA 95070

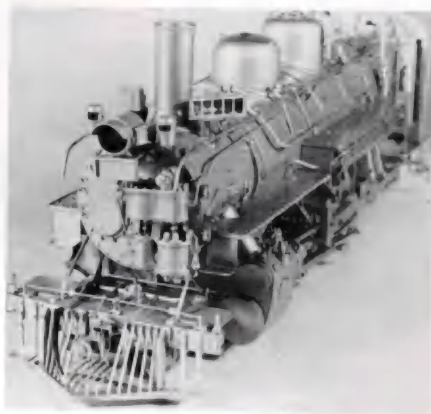
Sunset Models latest On3 model is a highly detailed rendering of the Denver and Rio Grande Western's K-28 Mikado. The model was built in Korea by Samhongsu.

Sunset's K-28 exhibits workmanship on a par with some of the better builders in Japan. The solder joints



are neat with no cold solder connections evident. The many fine detailing parts are mounted neatly. The boiler and cab are formed from sheet brass and appear to fit together well. The basic superstructure and frame are solidly built, but due to numerous details, the model should be handled with care.

The frame is stamped out of .100" brass. Individual machined nuts and bolts, dummy springs, and dummy equalizing levers have been applied for detail. The drivers feature excellent brass centers and nickel-plated, AAR contoured tires. They ride in bronze bearings which are sprung with individual coil springs. The bearing blocks are held in place by removable keeper plates. A 28 mm ironless



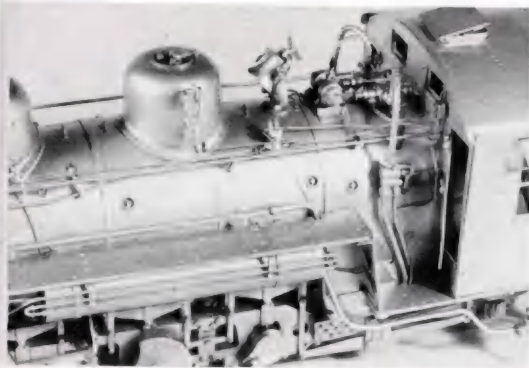
should be 7 feet 6 inches from the center of the first driver not the 8 feet 1 inches found on the model. You will probably want to shorten the lead truck drawbar or relocate the mounting hole. Once the two modifications were made, the locomotive functioned very well over a wide variety of trackage. If you have never operated a large K-class engine on your layout, then be prepared to move some line-side details out of the way. This locomotive is wide!

The level of detailing in the cab is impressive. Numerous U.S. made and Korean lost-wax castings were used to duplicate most parts found in the prototype cab. The cab is completely removable so painting will be straight forward. This is accomplished by removing four small screws located on the running board underside.

The model has a number of working detail parts such as the tender coal gates, trailing truck journal lids, cab windows and roof hatch. The cab doors open and close by means of some very small cast hinges.

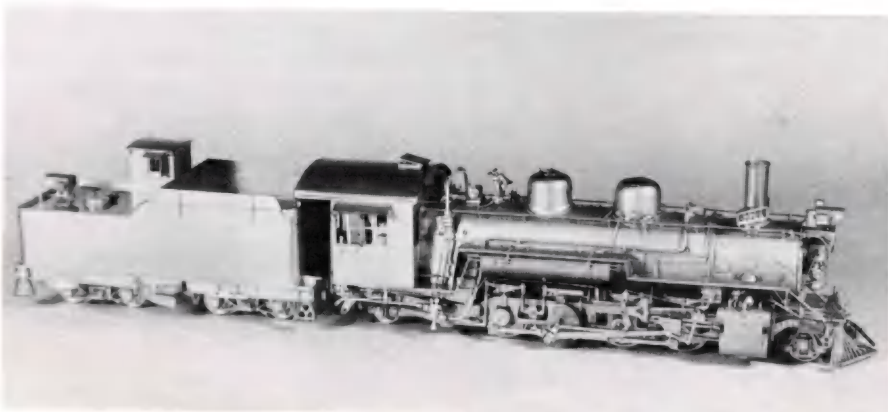
According to the importer, the K-28 is sold out. The model may still be in stock at your local dealer. Sunset Models' K-28 sells for an approximate retail price of \$600.00.

Gene Deimling



armature Maxon motor provides the power through a zamac idler-gear-box. The powertrain combination provides for smooth operation over a realistic range of scale speeds.

The locomotive successfully negotiated a 36" radius curve after a few changes were made. This reviewer found that the tender air-piping interfered with the swing of the trucks. This can be fixed by a little careful bending. The other change has to be made to the lead truck. It is mounted too far forward. According to Maxwell's drawing, the lead truck axle



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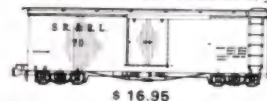
SANDY RIVER CAR SHOPS



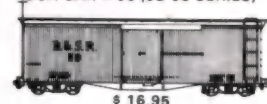
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HO Gauge Caboose

Keystone Loco Works
159 Wheatly Ave.,
Northumberland, PA 17857

Keystone is moving strongly into the eastern logging market. They will be issuing a new eastern prototype sawmill in both HO and O scales soon. They have recently issued a fine HO scale kit for a Grasse River caboose. This caboose was brought out many years ago in HO but this is a new kit. The model is composed of white metal castings and scribed wood. The kit is complete with trucks and wheels. The underframe is a one-piece casting and has the body bolsters and sills cast in one piece. Nut and bolt detail is cast onto the various parts of the frame. Pegs are provided for attaching the couplers. The ends are also white metal castings as is the cupola. The cupola comes in four pieces and has a wood roof. Metal roof ribs are provided for the wood roof. The steps and window frames for the sides are also white metal as are the trucks and brake details. The trucks for this car are of an unusual design. This design was used on the log cars of the Grasse River and were simply used on a caboose when the time came. You have to cut the window openings in the sides and brace the back of the sides with material provided. There are two pages of instructions plus a parts list and various drawings to help you assemble your kit. The wheels have pin point axle ends and fit into pointed holes in the trucks. I found the white metal castings to be clean and well detailed. Sometimes a white metal casting is a little heavier than a styrene injection molding. You may want to replace your brake wheel with one from Grandt Line. This is an interesting prototype of a very "typical" logging caboose and should fit well into any logging line. The kit sells for \$12.95 complete.

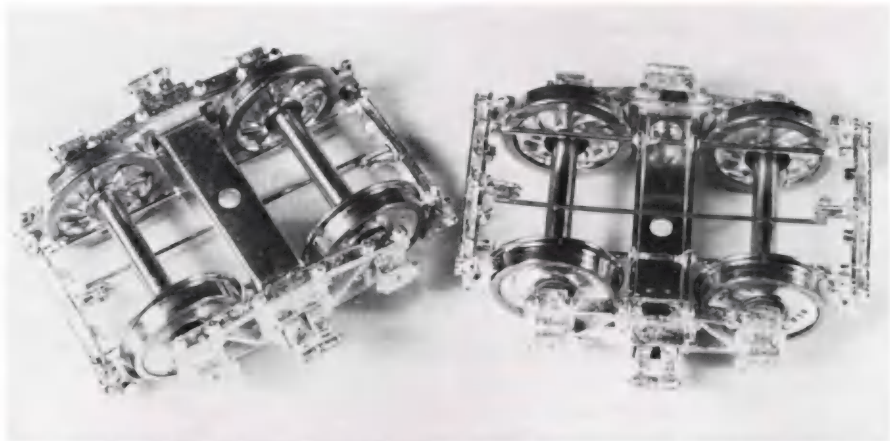
Bob Brown

GEMINI

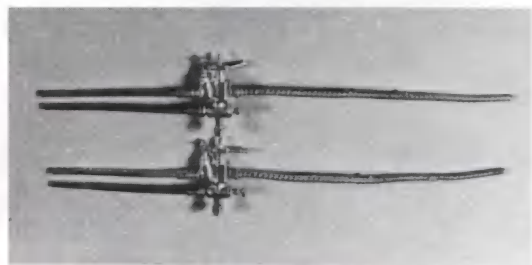


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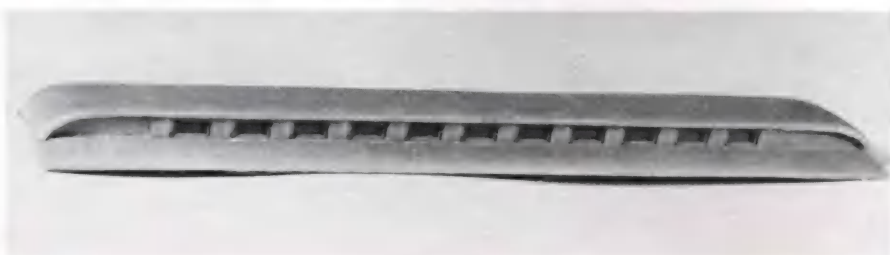


One pair of Iron Horse Model's new On3 D&RGW trucks is shown in this photo. They now have both the 3 foot 7 inch archbar coil spring and the 3 foot 7 inch leaf spring truck available. The photo shows the leaf spring version. The trucks are all brass except for the stainless steel tires. The wheel centers have raised lettering and bolster is stamped brass. The detail is excellent, the trucks are assembled neatly and they roll well. Write to Iron Horse Models, Route 1, Box 1802, Davis, CA 95616. *RWB*



Precision Scale Company, Route 1, Box 1802, Davis, CA 95616 has many, many, lost wax parts available in HO, O, and S scales. We will keep presenting samples of their new line as they come out. These photos show two samples. The boiler front is part 8591 and is for an O scale Lima boiler front. It is 30 inches in diameter and has raised lettering around the front. The other castings are for an HO scale Nathan Simplex injector. It is part PSHO-3143 and sells for \$2.75 per pair. Both of these parts are fine lost wax castings in brass. *RWB*

Sn3 seems to be growing little by little. Cascade Models, 390 Freeport Blvd., No. 9, Sparks, Nevada 89431 has issued a new line of kits. These were shown in full color on page 8 of the January, 1978, issue of the **GAZETTE**. I have one of their new D&RGW passenger car roofs. It is a one piece casting in polyurethane foam and merely needs to be cleaned up to be used. The clerestory windows need to be filed out but this is simple because the material is very thin. The roof casting has a slight texture which gives the effect of canvas and the seam lines are represented on the castings. If you have ever tried to scratch build a clerestory roof you will appreciate this new part. Each roof sells for \$5.50 and three types are available. *RWB*





One of the finest custom assembly services is offered by Light Iron Models. Pictured is a Rail Line box car painted and beautifully lettered, with #714 Kadee couplers and Grandt trucks with brake beams. Proper car weight, a brass brake wheel and other details are included. Everyone should have at least one quality custom built car and this is it. Superb quality. #101 (with truck brake beams) is \$34.50. Light Iron Models, P.O. Box 5752, St. Louis, MO 63121. CWG

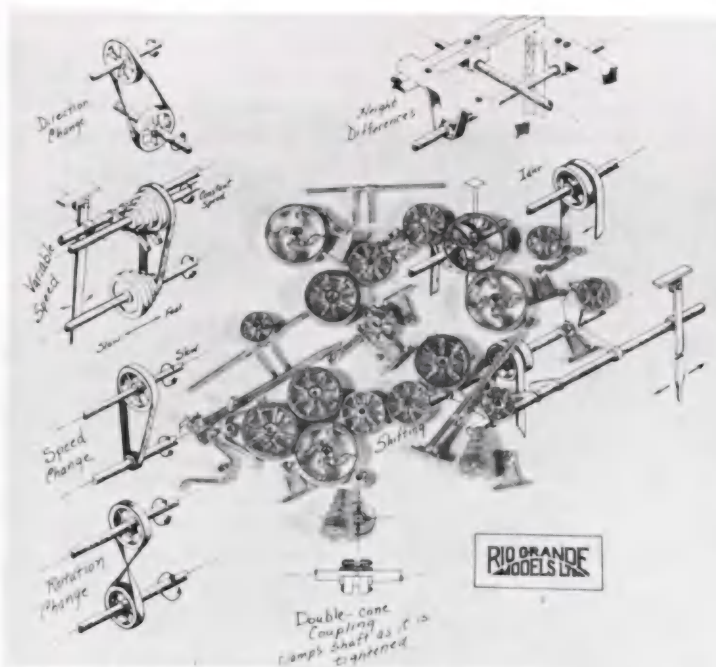
It's the little things that count and if you are a turn of the century modeler, a quality cast brass part such as this Burlington Patent oil headlight can be a life-saver. It was used on many "intermediate" era C-16's, Class 42 4-4-0's, and T-12's on the D&RGW. It's in HO and sells for \$3.00 plus \$.25 postage, and is available from Ace Model Shop, 1655 East Colorado Boulevard, Pasadena, CA 91106. Order part 000000552104415-7936061-5 (no kidding, that's what they wrote!). CWG



Railroad belt buckles are becoming very fashionable. Rio Grande Models has two new belt buckles available. These are unique because they are cast in the form of the famous Otto Mears Silverton Railroad 1893 railroad pass. One of the buckles depicts the front of the pass and the other the back of the pass. The buckles are cast in a silver colored metal and sell for \$8.95 each. Write to Rio Grande Models, Box 463 Agnew Station, Santa Clara, CA 95054. RWB

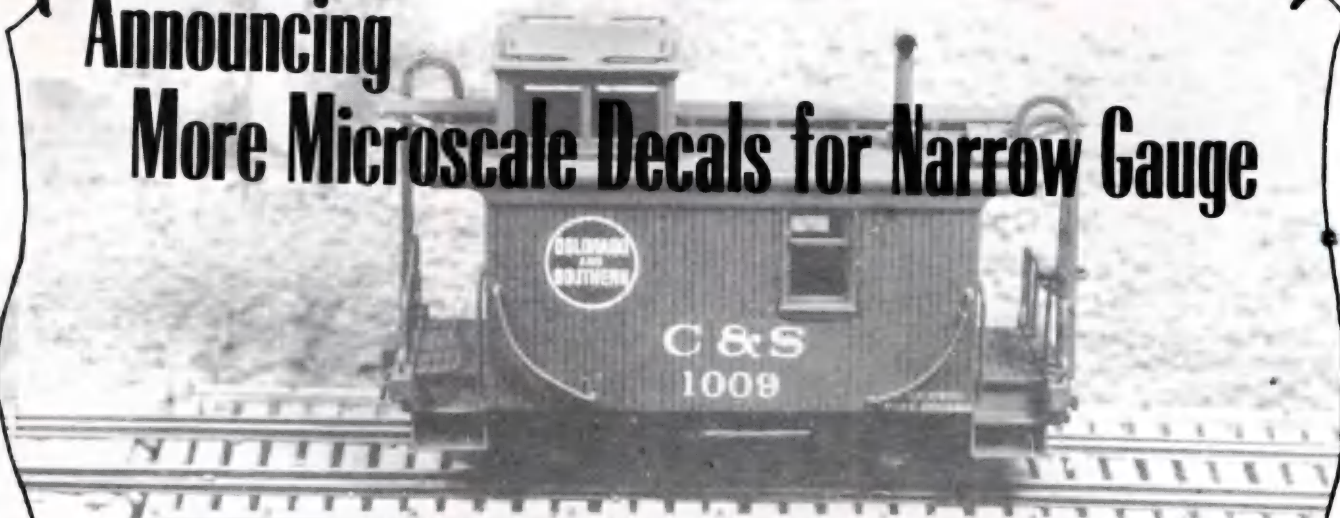


This interesting little diesel is being offered by Alan D. Carroll, 14 Lucille Ave., Westford, MA 01886. The model is freelance and is built over an Athearn SW-1500 with a flywheel drive. The diesel is available in either On2 or On30 and comes in three versions. You can order the model without couplers, headlights, bell, horn or stacks painted in primer for \$42.50. The second version comes with the details mentioned above but these details are not attached. This version sells for \$50.00. The third version has the above details attached and you have the choice of finish. Alan will paint the loco Engine Black, Grimy Black, Tuscan Red, Reefer Gray, Boxcar Red or Coach Green. Version three sells for \$52.50. The superstructure on these diesels is built up using the Athearn hoods with a styrene cab. RWB



Rio Grande Models, Box 463 Agnew Station, Santa Clara CA 95054 has released their second set of blacksmith tools. This set is for a complete overhead belt system. The set consists of about 15 pulley wheels, cone wheels, and the necessary brackets and shafting to equip a shop. Full drawings are also provided. The parts are cast in white metal and are well detailed. The price is \$5.95 per set. You have to provide the shop and the actual belting. RWB

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VOLUME #1, KINGFIELD, MAINE

This first volume in the series is 90 pages including covers. The text, photos and highly detailed drawings and maps fully cover Kingfield, Maine on the Sandy River & Rangeley Lakes RR. Drawings and photos are presented for all railroad buildings, including the original covered depot, "modern" depot, engine house, car repair shop, wood/tool shed, wooden turntable, steel turntable, hydrant house, powder house, coal shed, section house, car storage shed and water crane. Detailed drawings of the A.G. Winter General Store are in the final chapter. This store had a covered track for unloading freight at the store. Drawings are also presented for a track bumper post, switch stand and several signs. Maps and photos are used to show the arrangement of the several mills that surrounded this most compact yard layout. Most of the buildings are suitable for use on any railroad for modeling purposes and the specialized ones such as engine house, covered depot and car shop could have some dimensions modified by the modeler for use on his 3 foot gauge line. Even for the non-modeler this volume presents photos, information, maps and various timetable and tariff reprints to "tickle" the fancy.

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VOLUME #3, SR&RL #10

Volume #3 is devoted entirely to full presentation of drawings and photos relating to Sandy River & Rangeley Lakes locomotive #10. This 2-4-4T is presented in the same style as #23 is in Volume #2. The drawings are all from original Baldwin Co. files and are preserved by the Phillips Historical Society. The detail in the drawings is superb! Build the full scale version if you want to! Available in two forms:

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VOLUME #5, SR&RL-MILE BY MILE

This volume promises to be an opus of epic proportions. Generally it will provide a mile by mile description of the Sandy River & Rangeley Lakes RR, starting in Farmington and proceeding "up line" through Strong to Rangeley and then on to Bigelow. Coverage of Kingfield and Phillips will be limited to only include any new photos or drawings uncovered during the interim. This volume will include complete coverage of all structures, including bridges, signs, buildings and other R-O-W fixtures and trackwork. Also you will have the entire profile and R-O-W maps produced in 1916 redrawn for your reading pleasure. The maps will also reflect line changes, sidings, terrain and projected (though unbuilt) lines. It is estimated the volume will have nearly 200 pages and nearly 300 photos. Most of the photos are used to explain details of construction, but a large number are not previously published in any form. Price and publication date to be announced. We are taking reservations

only for this volume now. Send no money.

SANDY RIVER & RANGELEY LAKES RR

VOLUME #2, SR&RL #23



Volume #2 is now ready to ship. This volume covers the Sandy River & Rangeley Lakes RR engine #23. Built by Baldwin Locomotive Works in 1913, this 2-6-2 was the largest locomotive built to operate on any of the Maine two-footers. The drawings represented in this volume are from original Baldwin erecting cards and later supplied to the SR&RL when the locomotive was delivered. All original tracings have been faithfully redrawn to clarify long-faded details. The originals used in preparing this book came from the Phillips, Maine Historical Society and from the collection of Edward Bond. There is no "puffery" in the statement that you could build the original full scale locomotive from these drawings! Some examples of the content: full boiler detail, frame, valve, cylinders, tender and air brake diagrams. Included are original specs as sent to Baldwin by the Maine Central RR (the SR&RL's owner at the time) and the many changes that the locomotive underwent in its 18 years of service. Photos are used to illustrate changes and details. This volume is a must for two foot fans whether you model in HO scale or want to build a live steamer.

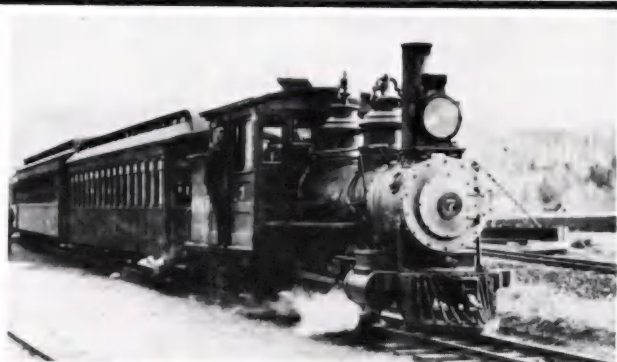
Volume #2 is available in two forms.

The basic book as described.....\$10.00
The basic book plus a two drawing set, consisting of the side elevation and a sheet of cross sections of the engine only. These are in 2" scale and are blueprint copies of the originals. They measure 24" wide and 65" and 68" long respectively. This "deluxe" edition with folded drawings is.....\$16.00



VOLUME #4, PHILLIPS, MAINE

This volume full covers the Phillips, Maine yards of the Sandy River & Rangeley Lakes RR. Drawings of the several engine houses will be shown along with full interior detailing of the brick engine house and repair shops. The turntables, stations, coaling and water facilities will be presented as well as the Phillips & Rangeley stone engine house. When you get this volume and read its text and study its photos and drawings you'll feel that you've been a lifelong resident of this Maine village. Price will be announced just prior to printing. We are taking reservations only as of this time.

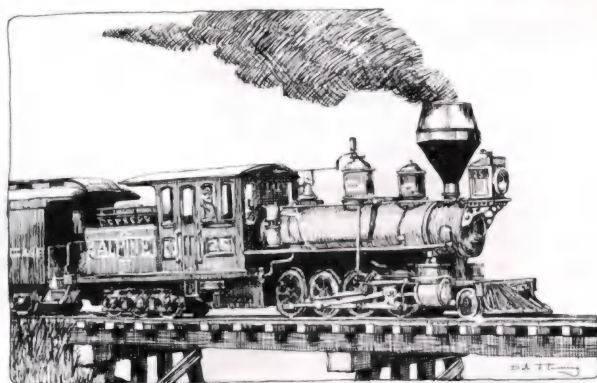


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The Narrow Gauge Scene



by Charles Getz

As hard as it is for me to believe, this issue marks our fourth year of publication. The last few years have seen a few changes—"growing pains" typical of any new enterprise. We've settled into a comfortable niche now and are rar'in to go. Our staff, none of whom does this full time, or for a living (except our office manager, Suzanne) is committed to making the **GAZETTE** the finest magazine of its kind *anywhere*. Our production crew, Tech Media, brings that same dedication to the production end. We're excited about the future, and our new price insures there will be one. Above all, this is a "joint venture"—we can't do anything without the help, support, and encouragement of *you*. Keep us honest, keep writing to us, and keep reading. It's what makes us stay up to wee hours on a weekend finishing that article for which we'll be paid the magnificent sum of \$11.96. Heck, I get just as big a kick as anyone getting the new **GAZETTE**! In the spirit of our new look, I'll be featuring some beautiful column headings from the talented pen of Dale Fleming. Now *that's* narrow gauge.

Given the powdery white stuff many of you have seen too much of this year, our topic of interest is appropriately flangers. What's a flanger? Don't laugh—I wasn't all that sure when I started. A flanger is a specialized snowplow whose main purpose is to clear the flangeway of the track, as well as to contour the snow removed by a rotary or wedge plow. It usually operated behind another type of plow and thus "drag" flangers were never pushed but rather pulled behind a locomotive. The frame couldn't take the buffeting of pushing.

As you can see from the prototype photos of the D&RGW n.g. jobs, most flangers were simply glorified "flats" originally built of stout timber, later modernized with steel channel underframes. They featured a flanger plow,

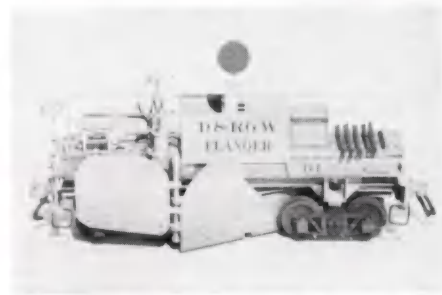
forming a "V" which fit over the track and extended out to abbreviated side wings. The plow was lowered just between the rails by an air cylinder supplied from the locomotive's air reservoir. A large lever was also provided to raise or lower the blade mechanically.



All flangers possessed these features, but there the similarity ends. Often homemade, flangers had a personality all their own. On the Rio Grande narrow gauge system, eleven were operated, and no two were identical. Some (such as OL) had double-jointed side wings (these were operated independently too!) while others were of simpler design (like OD). For more information and photos of the Rio Grande's flangers see the January and February 1976 issues of the **NMRA BULLETIN**. Study the photos of the D&RGW prototypes/models provided through the courtesy of Eric Bracher from his collection (the prototype photo of OD is by Kal Sentrol). By careful study, especially of the mechanism shot of OD, you can understand where everything was, and how it worked. The cylinders and tanks on the deck controlled the raising and lowering of the flanger-plow. That large "U" shaped lever allowed mechanical operation. The "switchstand" target device showed when the blade was up or down. Often, the critical parts of the mechanism were protected from the elements by a box-like cover (see models of OS and OL). A tool box was

quite commonly provided as well, and the deck was usually littered with re-railing frogs, chain, and the other debris of fifty winters.

Besides the Rio Grande, the C&S and RGS operated flangers; indeed almost every road that ran in the winter found a flanger to be indispensable.



Luckily for you HOn3, Sn3, and On3 railroad presidents, models are available, though you'd be hard pressed to have found these kits a few years back.

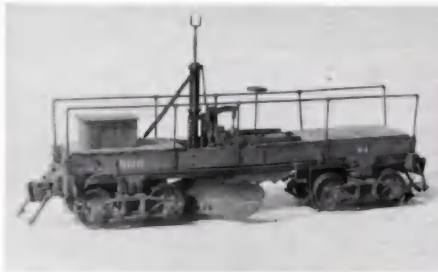
In HOn3, by far the greatest selection is offered. Rio Grande Models leads the field with their D&RGW kit, as it builds into *any* of the Rio Grande's eleven versions. Plans and photos are provided to help you achieve individuality. The model photos of OL and OJ were built from RGM kits. A brass version of D&RGW OD is offered by NJ Custom Brass in HOn3 for those of you who don't wish to assemble a kit. Durango Press offers Rio Grande Southern plow-flanger 01, as well as enclosed flanger 02 (which also featured a massive wedge plow). The photo of RGS 01 is not DP's kit, but rather a scratchbuilt job built some years back by Stan Rhine (photo by Charles Brommer).

In Sn3, the field belongs to RGM with their D&RGW flanger kit. Rio Grande fans in On3 will have to scratchbuild or grab one of NJ's brass flangers (again D&RGW OD). DP's RGS No. 01 and 02 are also available in On3 as limited run items.



The Don Meeker photo of the Colorado Midland rotary is from Forrest Van Schwartz and is a Rivarossi HO job overlaid with Evergreen styrene siding and Grandt details.

On to news! Brasswise, it's still coming in—the golden (or at least “brass”) age of narrow gauge! PFM is importing in all three scales. HOn3 fans are awaiting the K-36, K-37 and Uintah Mallets. Can RGS No. 20 be far behind? Sn3'ers are pinching themselves to see if the RGS No. 20 is for real. Yes, it is, and in On3 too!



Wow, huh? Westside concludes its Rio Grande series in 1978 with the K-28 and C-21. More C-16's coming too folks, all in HOn3.

Kemtron reports that the new C-16 kit is selling like crazy and suprisingly, the old time version is selling very well. There are apparently more people in the old-time modeling than suspected. We'll be reviewing the new C-16 in depth very soon.

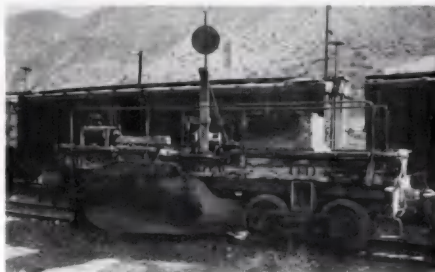
Sunset models' next On3 engine will be a C&S - RGS 2-8-0 #74, later this year.

Iron Horse Models must get the award for the most ambitious program in years! In HOn3, they plan the D&RGW/RGS 0-6-0T (finally!). In On3, just look at this proposed lineup, all limited in number: Mich-Cal No. 2 Shay, 24-ton “Santa Barbara” type Shay, 40-ton Climax K-37, C-16 No. 271, C-19 No. 346, Nevada County Narrow Gauge No. 5 and No. 8, SP narrow gauge No. 8 and No. 9, and Colorado and Northwestern's three-truck Climax! That doesn't include their current offerings, K-27 No. 461, 45 and 463, and the 4-4-0, or rolling stock (see below), or HO and O standard gauge equipment. The head spins!

Grandt's HOn3 er- “boxcab” diesel is for real. It was used in the late 1960's to help relocate D&RGW's “mainline” from Alamosa-Durango due to construction of the Navajo Dam. Coupled to a drop bottom and high-side gon, it was a genuine 3-foot unit train! Wierd but true, and won't one of these units make heads turn on your layout?

The Car Stop, P.O. Box 8351, Postal Station F, Edmonton, Alberta, Canada, T6H-4W6, is selling the long awaited Sango brass HOn3” engines as shown by their ads. They hope to offer both 2-6-0 and 0-6-2T styles plus tenders and arch bar trucks. Drop 'em a note for prices and specifications.

S.S. Ltd's new HOn3 and On3 Silverton railbus will really be Ltd. After the entire run is sold, the masters and molds will be destroyed! This



will be followed by the nervous breakdown of S.S. Ltd's pattern-maker! Obviously, if you want one, you'd better act soon. S.S. Ltd will also be republishing the 1901 “Rocky Mountain Views” color brochure once offered by the D&RG. It will reproduced exactly as the original and will be limited to 2000 numbered copies. Then the plates will be destroyed.

Sn3 is really booming! Besides the RGS #20, Swede Norlin of Tomalco, MR. Sn3 himself, called the other day to proudly report his D&RGW No. 50 diesel is ready. Don't overlook its use in S or On2. Tomalco offers a whole line of super Sn3 and would you believe Sn3 flex-track! Yep, code 70 rail on random-spaced delrin ties. (Not to be outdone, a new manufacturer ADDM is offering On3 flex-track too—will wonders never cease?) Swede also reports that despite a few delays, the Conoco No. 5 tank car should be available shortly in Sn3 (also HOn3, On3!).

Rio Grande Models is also expanding its line of Sn3 with trucks (like SP 4-foot), cars including 30-foot reefer and frameless tank, and even 55-gallon oil drums! Rumor also has it someone will be producing an Sn3 D&RGW

short caboose and boxcar. And you saw that Cascade Models ad last issue. Yessir, Sn3 is hopping!

Speaking of rolling stock, Iron Horse Miniatures also proposes a D&RGW coach-combine No. 215, and No. 212 with cupola, coach No. 325, and water car W-462, as well as East Broadtop hopper, all in On3. These guys don't know when to quit!



For some obscure reason, there appears to be a scramble to corner the HOn3 D&RGW 6500 series flat car market! Now these cars are comparatively modern (*circa* 1940) steel fishbelly jobs that do not conjure visions of n.g. glory. In fact, except for the gauge, Athearn could easily have popped 'em out in plastic with AT&SF on the side. Yet both Westside and NWSL have scheduled them on the brass import list. I welcome the diversity of the 6500 series, but *two* manufacturers?

Speaking of Westside, Jim Finnell of Durango Press wishes to publically acknowledge the generous financial investment of Westside into some of Durango Press' products. This allowed a number of products to be released earlier than scheduled. A good deal for all concerned.

Notice the photo-review of Light Iron's assembled Rail-Line boxcar. Not just Rail-Line boxcar assembly is offered, but R. Robb's drop-bottom gondolas, 6000 series flats, MDC's 2-8-0, and Quality Craft's short caboose. Correct trucks, Kadee couplers, extra weight, and extra details are included on each job. Write them directly for prices and details.

Rio Grande Models submitted a photo of their next release in HO_{N3}—Pile Driver OB and idler flat. Wood by Kappler, Grandt trucks, Thinfilm decals, RGM white metal castings all add up to top quality. Their D&RGW water cars in HO_{N3} and Sn3 have been delayed, unfortunately. Newest trucks from RGM are D&RGW caboose, passenger and Carter brothers as used on the South Pacific Coast, among others.

Jim Finnell of Durango Press is proud as can be of his new styrene Westside Lumber Company caboose in HO_{N3}. We'll be reviewing it soon, and it is a beaut. Jim and I just returned from the Cumbres & Toltec Rotary Run, incidentally.

On the structure front, our friends at Magnuson report an exciting new development. Apparently they have perfected a one-piece casting process that allows entire sections of a structure to be cast in one piece. The first release utilizing this new process will be a station, with five (count 'em) five castings! We can't wait to see how this one looks. Evergreen Hills design is going to offer their

popular Dollar Bros. express building in HO as a regular item with Grandt castings and may do it in O scale. Also they will soon be producing a really needed item—a slash burner with conveyor in HO for sawmills. These are a real pain to scratchbuild so welcome it with open arms! EHD is also the distributor for wood wizard Frank Kapplers' superb line of wood (outside California). Kappler is to wood what Grandt is to styrene.

You can find Kappler's wood in Durango Press' newest structure, part of their new Western Town series. It's called a "newspaper office" but there are no decals or signs included, so you can make it whatever you wish. Look for it soon.

In our Items of Interest Department, Rio Grande Models' next offering of interior machinery will be a roundhouse air compressor and tank followed by a vertical wheel borer and wheel press; also new is an overhead belt drive system to power all this vintage machinery. RGM is also going to duplicate the famous Otto Mears silver passes in the form of belt buckles! Three styles will be offered. . . Plaudits to Northwest Short Line for their HO_{N3} MDC 2-8-0 conversion gear sets, easing the task of re-powering this engine as outlined in

Scoles and Shay's excellent article in the September 1977 **GAZETTE** ... Mr. Weather, P.O. Box 901, Defiance, Ohio 43512, offers a custom weathering service. For anywhere from \$1.50 (N scale cars) to \$20.00 (O scale locomotives) he will weather any car or engine you send. Write directly for details.

Sundance Publications Ltd's new *Mineral Belt Vol. I* should be available soon. *Vol. II* will be out in about nine months. Also in the works is a series on the Denver and Rio Grande called aptly enough, *Rio Grande Chronicles*. It will cover the system route by route. . . If you think 3-foot gauge is too broad, and haven't ordered Vols. I and II of the *Two-Foot Cyclopedia*, shame! These are superb large-format works that are the ultimate word on each covered subject. The line-up of proposed Cyclopedia topics is staggering, covering all aspects of each Maine two-footer including mile-by-mile guides. After Vol. 22 (!), Bill Jensen hopes to turn to other 2-foot lines around the country and around the world. Put me down for one of each, and when will someone do this for the RGS? . . . reader Cary B. Olenhouse highly recommends a new book by Phyllis Flander Dorset called *The New El-*



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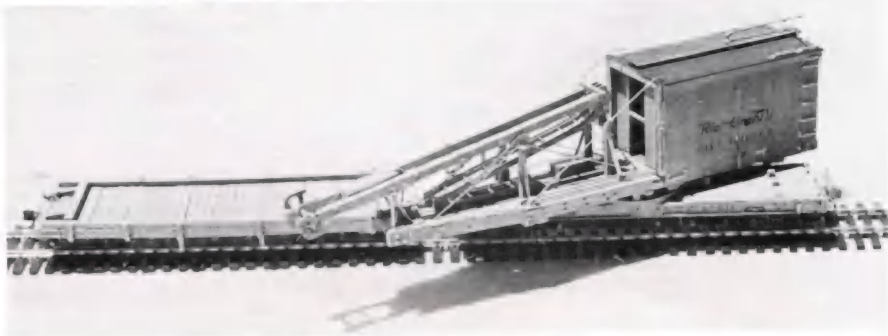
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Dorado on Colorado's Gold and Silver routes. It's published by McMillan Co. of New York. Hope to see one soon. . . . That impressive assemblage of power packs is the Troller line in its entirety. If you cannot find the right combination of power for you in this high quality line, then you are either running live steam or RC planes!

In our "It's only a rumor but you heard it here first folks" department, The Narrow Gauge Car Shop is reportedly working on a New Mexico log car in HOn3 in plastic, as well as East Broad top two and three bay hoppers in the same scale and material. Jordan Products, that prolific pioneer of plastic vehicles is still kicking and slowly upgrading old dies. He may resurface any time now, and would his next release be a hearse? Welcome back, Jordan, and the hearse is *not* symbolic of this superb line!

In our Help department, the Locomotive Workshop (Robertsville Road, Box 211, B1, RFD No. 1, English-town, NJ 07726) would like to assess the market for an On3 brass East Broad top hopper kit with trucks for around \$30.00. Write directly.

Finally, in our Notices department, Harry Sage, King Snipe of the narrow gauge Mini-bunch reports the Spring, 1978, n.g. meet will be held on May 21 in Connersville, Indiana. No kidding, and write Harry at 4929 Atwater Drive, Columbus, Ohio 43229 for details. Where is Connersville, Indiana?

And I've just noticed how long this column is! Enough, enough. See ya in May. Write if the mood strikes, and send a pic of last month's C&TS Rotary run if you have one, in case mine didn't come out.

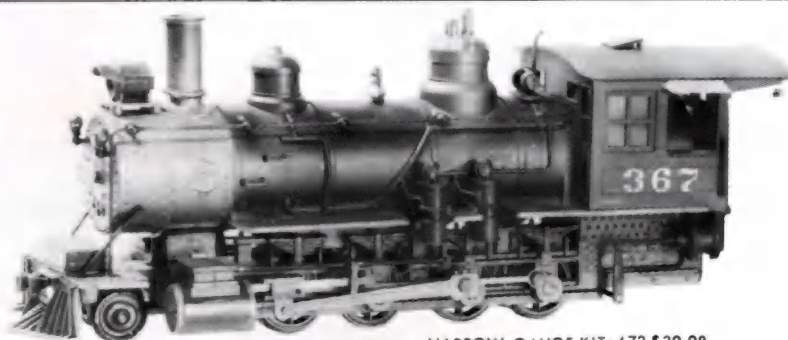
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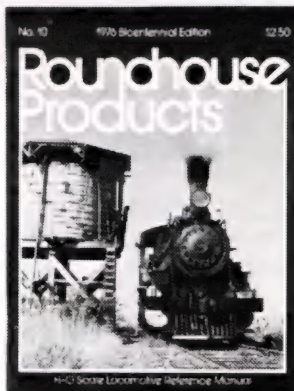
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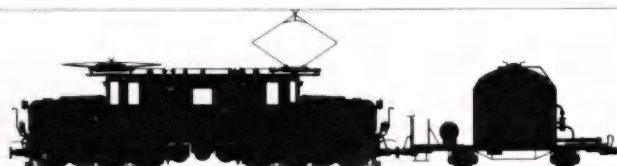
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IN SEARCH OF ACCURACY

"The Lambert Colorado and Southern Mogul"

By Harry Brunk

In the Fall, 1974 issue of the old **SLIM GAUGE NEWS**, Leighton Slough commented on photos of the Lambert C&S 2-6-0 then soon to be released. His comments were so right to the point, that they bear repeating here:

"[I would like to] comment on Lambert Associates' soon to arrive 'Colorado and Southern 2-6-0.' Had they stopped there, I could have chatted comfortably about how well Lambert had caught the spirit of lower numbered moguls and how good it was to have another C&S locomotive on the market. I could have pointed out how closely visible detailing appeared to match the prototype and how easily it would slip into the roster under a variety of numbers in the 4-10 range as a representative of B-3-C class engines. All of this is true. But they went on to say 'This Mogul was....finally C&S No. 9.' **WRONG!!** '...with 'Bearcatcher' stack'???? What's that? Their advertising tries too hard and is too specific. Item, tops of steam and sand domes appear to be flatter than No. 9 and closer to contour of No. 8 and No. 10 as pictured. Overall height of domes appears to be somewhat taller than on prototype. Under cab piping is different from No. 9 as we know it, though I do have a photo of No. 9 as we do have a photo of No. 9 in 'pre-Beartrap' operation that is similar. Cab windows are not right in that No. 9 was the exception, having a solid post section in each forward cab window. Cab roof needs another smaller vent or hatch and No. 9 had an interesting superstructure on the forward end of the tender, missing from the model. Smokebox front is typical C&S, but not No. 9.

So much for criticism, brought on primarily by specific references to prototype and terms such as *fantastic detailing*. The locomotive looks good and is unmistakably B-3-C class. The cinder chute IS right, a claim most other C&S models cannot make with their corkscrew like offerings."

In fairness to Lambert, after these comments, their ads for this engine dropped the direct reference to their offering as #9 specifically. As Leighton Slough said, the model as received is a good "starting point" for any of the C&S B-3-C class, and many no doubt are running today around the country with little or no modification. What the photos did not show was the "tall in the saddle" effect caused by a too tall cylinder saddle and rear cab support. Roughly a scale 6" too tall in fact — no doubt to clear the motor which is cab mounted and covered with extended boiler and backhead. For my money, this extension could have been eliminated in favor of a better motor along the lines of the KTM types on the Westside C-16's then and now well established, and the "hunkered down" look of narrow gauge engines could have easily been achieved on this 2-6-0. As it was, the motor was of the cheaper slot-car type, and as my modifications and test runs progressed it promptly began to burn up it's brushes like a fourth-of-July sparkler. My advice is to remove the motor during the strip-down for modification and eliminate it entirely. The can motors, Micro Mo, etc., are made for this baby, but an over abundant supply of KTM U-81 types once imported by Kemtron (supply unknown at this time) demanded I use one, and my modification brings the 2-6-0 mechanism up to a point comparable to the Westside HOn3 C-16 as received from that importer.



Fig. 1 — The author feels that this locomotive is the closest to Lambert's model. Colorado & Southern #6 at the Denver, Colorado shops in 1930. Photo collection of Harold Vollrath

After lengthy study of photos of all engines in C&S's B-3-C class *Colorado Rail Annuals* No. 10 and 12, Hol Wagner Jr's *The Colorado Road* and of course, the *Pictorial Supplement to Denver South Park and Pacific* by Kindig, Haley and Poor—all good references, most details on Lambert's import seemed to point to #6 as the closest. Fig. 1 shows #6 at the Denver shops.

Now to the nuts and bolts work: (These changes apply no matter which B-3-C you intend to model) disassemble the boiler, cylinder assembly, tender top from frame and bed, removing the drivers and trucks for safe keeping.

Clean off the brass paint (many commercial paint and varnish strippers are available, and the one I used tends to leave behind a greasy film removed only after repeated scrubbing with detergent so I won't recommend it). The paint removal restores the "pristine" appearance of a brass model, and you feel less reluctant to tear into it. Tools used are rather simple (maybe even primitive by some standards). Hand held motor tool with cutting disc, and a small soldering torch or gun are all the more sophisticated we'll get. My soldering tool is a carbon rod soldering gun.

Cut off the cylinder saddle (Fig. 2) carefully with motor tool. "Nibbling"

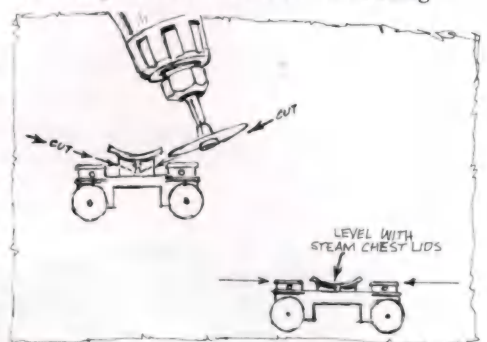


Fig. 2 — Modifying the cylinder block.

at it will help you avoid gouging the cylinder chest lids. File and smooth cuts 'til cylinder saddle low point rests level with steam chest covers — solder it squarely.

Unsolder the "ears" of cab supports at the frame rear. Flatten out and resolder using old score or fold lines to keep screw holes matched with cab floor screw holes. (Fig. 3) You should use the boiler cab assembly to double check position before resoldering. These reset cab supports will come in handy a few steps down

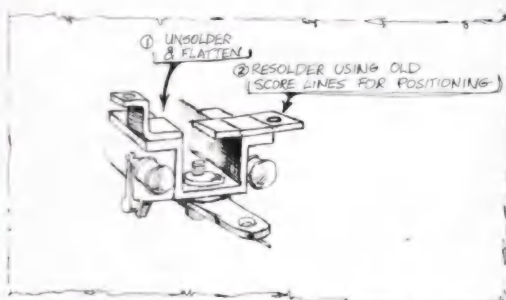


Fig. 3 — The rear of the loco frame.

the line. Now re-assemble cylinders to frame with the hollow keeper screw. Test the boiler and smoke box for snugness and alignment. The hollow keeper screw in the cylinder saddle may have to be ground down some to allow the smoke box to rest securely. Don't worry — the cylinders won't have to be disassembled from here on. The boiler "belly" may also rock and teeter on the crosshead guide. If so, groove it out a little with the trusty motor tool and cutting disc. Eyeball the boiler and cab alignment with frame and cylinder — making sure bottom of boiler and top of frame are parallel. The screw holding the crosshead guide interfered on mine, and I grooved an indentation on the boiler belly to clear. Just a little does the trick but I got a shade carried away. Trial fittings work best here, but don't curse too much, the drivers hide this anyhow. Now put drivers in frame and check clearance of boilers. The flanges on the first driver set will be close, but should clear. Now compare your rough fitting with the plans. Compare well, don't they? Sitting on the track, she should now have that C&S "hunker". Remove boiler and unsolder the cab floor and running board just ahead of cab. (See figures 4 and 5 for clipping cooling coils on engineer's side) The rear cab support frame end casting will come with this. Shorten the extended drain pipe on the fireman's side of cab floor — the forward pipe

only (see plans). The small tank on this side must come off also. You will probably have to grind clearing space on bottom of cab support/frame rear casting to avoid shorting on draw bar. With screws joining the separated cab floor to the frame mounted cab supports (the "ears"), solder them together. With some clean-up the frame and cab floor assembly should mate easily with the boiler and cab assembly.

Removing the boiler extension in cab proved tricky and a little hair raising, but it can be done with judicious use of the motor tool again. I removed the rear of the cab by cutting and unsoldering. The doors were cut out and resoldered in an open position. A portion supporting the cab roof was left in place and squared off. This leaves bottom and back clearance for the motor of your choice. Figure 4 shows how I solved that step with the KTM and Kemtron's universal set

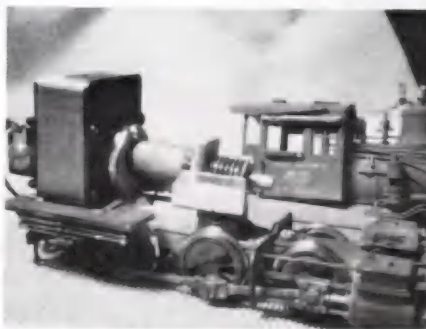


Fig. 4 — The motor installation, universal joint and clipped cooling coil.

(No. 6061). When things are running right, fit up shim brass fire box sides with rivet and staybolt detail and solder behind idler gear to fill in the gap. I added guards to keep the gear grease from splattering the drivers. Small cab corner pieces were soldered, drilled and tapped for 00-90 screws to secure rear of cab boiler assembly.

The rest is adding, removing and shifting existing details on the superstructure and pilot deck to bring it closer to plans and photos of #6.

Domes were the major item. With a scrapped United C&S 2-6-0 (#21 or 22) on hand, I lucked out. These domes matched the flat topped contour of all the C&S 2-6-0's (#9 excluded). The sand dome had to be shortened, and a Kemtron four chime whistle added to the steam dome — that was it. You could turn down the domes that came with the engine. Some shortening of the domes may also be necessary. Page 40 of the Sept. '76 GAZETTE shows Daryl

B. Ryders' Rio Grand-sized 2-6-0 sporting domes of the apparent right size and contour. Maybe he could tell us where they're from.

Next was the handrail on fireman's side. Heating the solder holding the second handrail stantion and raising it slightly out of it's support then allowing the solder to cool holding the second handrail stantion and raising it slightly out of it's support then allowing the solder to cool holding the stantion in a raised position solved the extended stantion problem easier

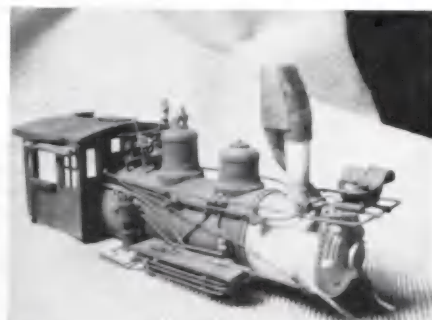


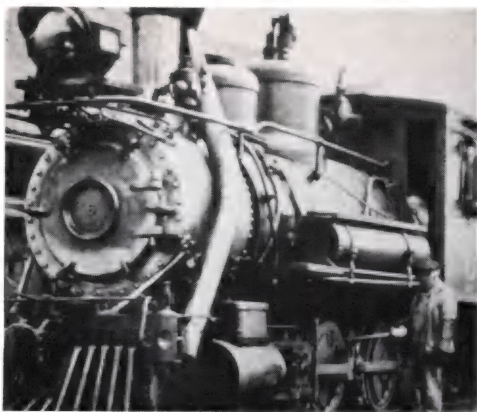
Fig. 5 — The loco superstructure showing clipped cooling coils.

than expected. Appropriate bends in the hand rail finished this detail.

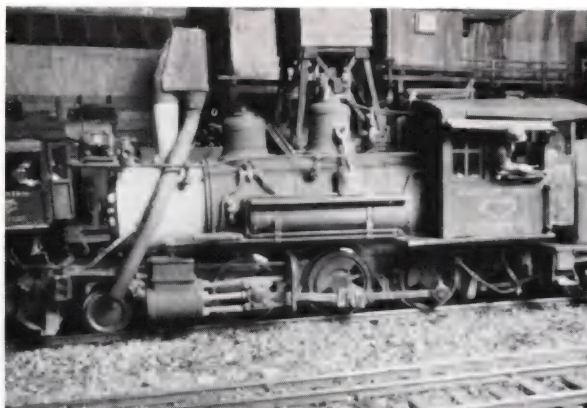
Eyeballing plans and photos of prototype and model will tell you most of the rest. Some details were passed lightly over or only modified slightly. Cooling coils were moved out and up slightly to align with the bottom of air tank. Shim brass wrappers with riveted ends were overlaid on the air-tank. Also, forward walk supports in front of the air tank were modified, as were the whistle, bell ropes, and conduit. I also straightened out the unprototypical bends in the sand pipes and cinder down spout. I added Kemtron marker lamps to the loco. The cab over-hang was excessive and the 9 inches removed was fashioned into an under-eave support at the rear of cab and soldered. I added a short cooling coil under the cab on engineer's side. Gaps between axle and counter weights on drivers were epoxy filled to match C&S style (see #9 prototype photos).

Number 6 sported cab awnings of varying lengths during it's career. Some photos show a full length awning over both windows. Others show shorter ones only over the opening (rear) window. I chose the full length for both sides of the cab, and using shim brass and wire, modeled the engineer's awning folded up for variety.

The pilot deck mounted flanger mechanism and the attending air cylin-



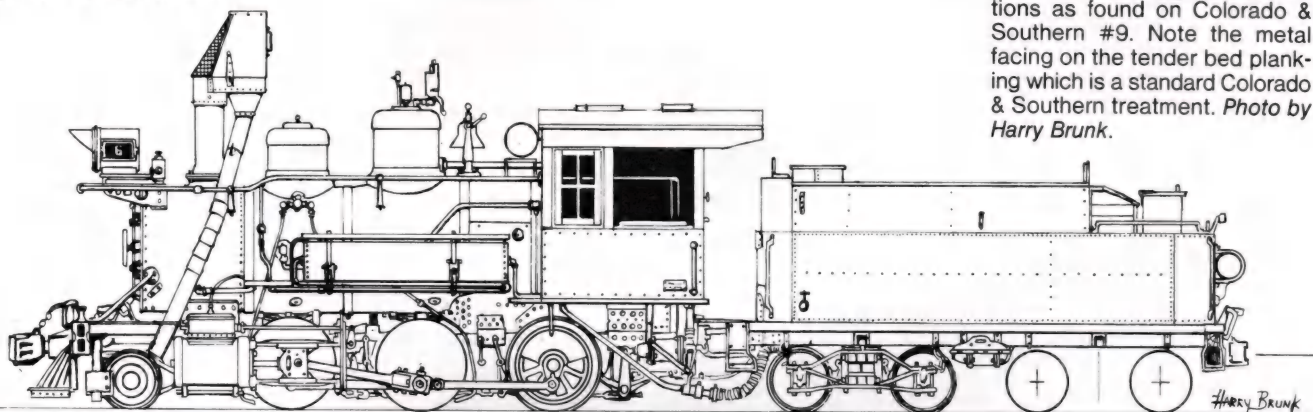
Front end detail of Colorado & Southern #6. Compare the smoke box front and the cooling coils under the tank when compared to those of the unmodified Lambert 2-6-0. Photo by Richard B. Jackson.



The author's modified Lambert Colorado & Southern 2-6-0 at work. Notice the "hunkered down" look of the locomotive. Photo by Harry Brunk.

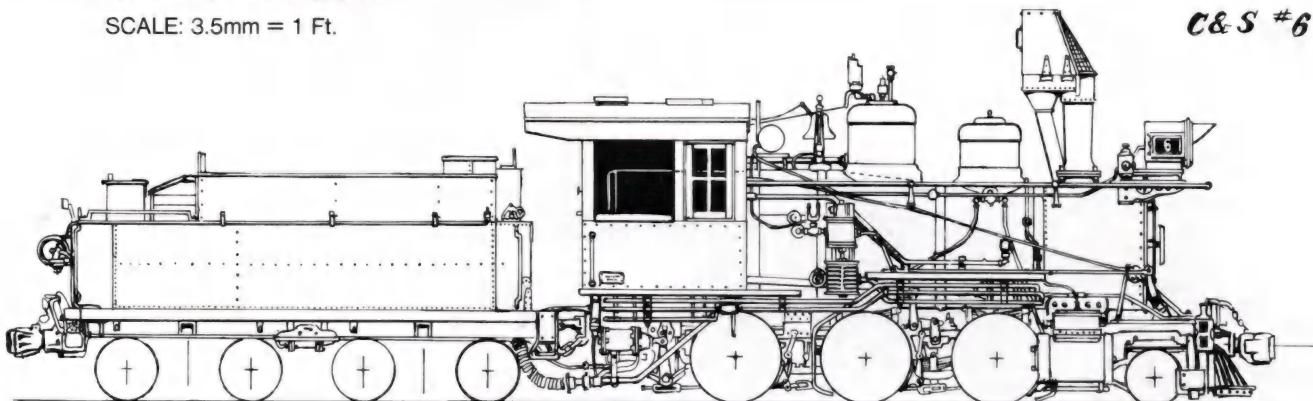


The tender-engine connections as found on Colorado & Southern #9. Note the metal facing on the tender bed planking which is a standard Colorado & Southern treatment. Photo by Harry Brunk.



SCALE: 3.5mm = 1 Ft.

C&S #6

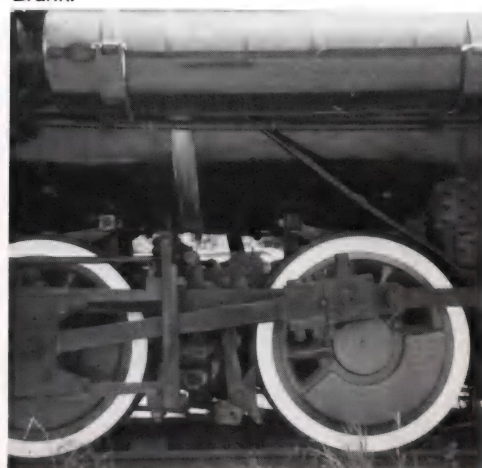
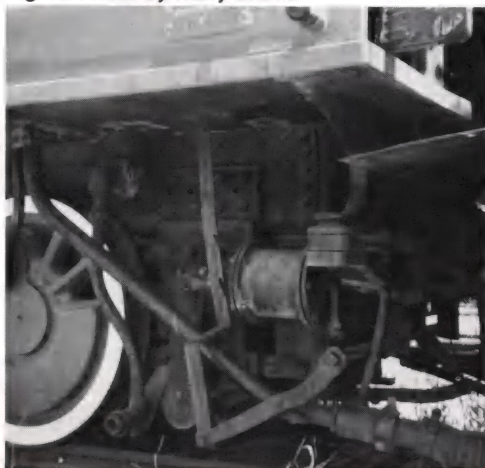


C&S #6

Air regulator, storage boxes and hand pump are all shown in this front, right side view of the tender of #9. The offset shields on the water legs are typical Colorado & Southern. Photo by Harry Brunk.

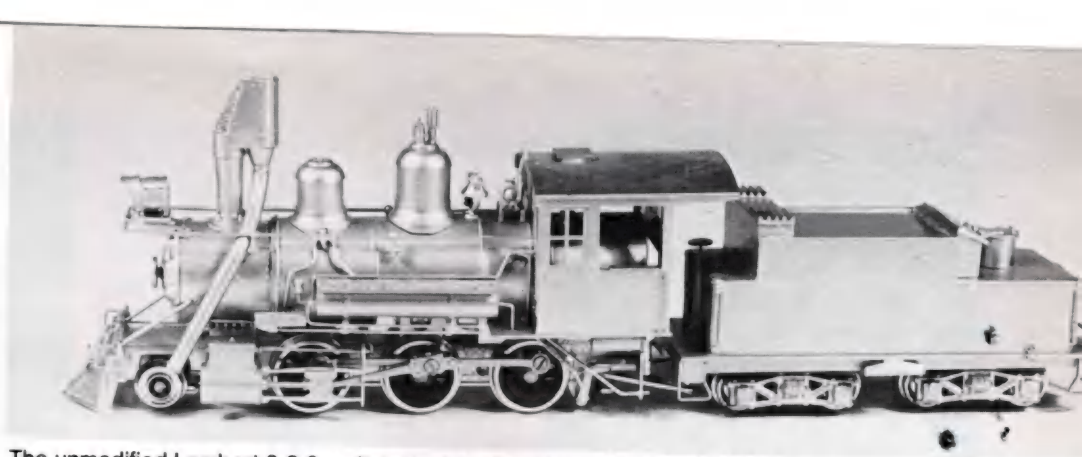
The left rear under the cab of Colorado & Southern #9. The flat bar just outside of the brake cylinder is the grate shaker and ash pan dump lever connection. The bends and arrangement vary slightly from engine to engine. Photo by Harry Brunk.

The drivers on Colorado & Southern #9. Note the filled-in space between the counter weights and the axle on the wheel castings. Photo by Harry Brunk.



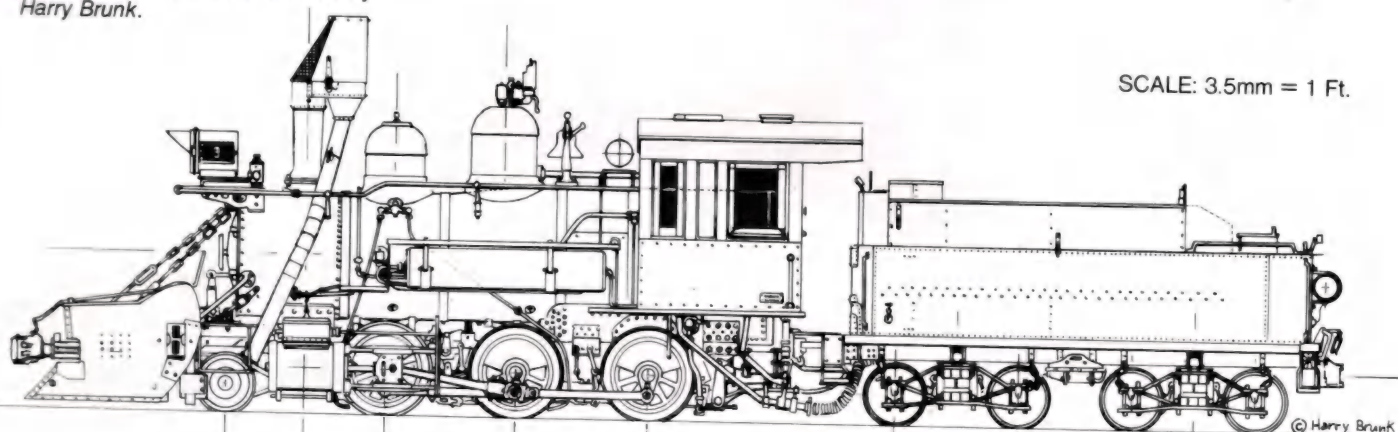


The right side of Colorado & Southern #9 as it is today showing the right side piping which is similar to that of #6. Number 9 is on display at Hill City, South Dakota, at the Black Hills Central RR. Photo by Harry Brunk.



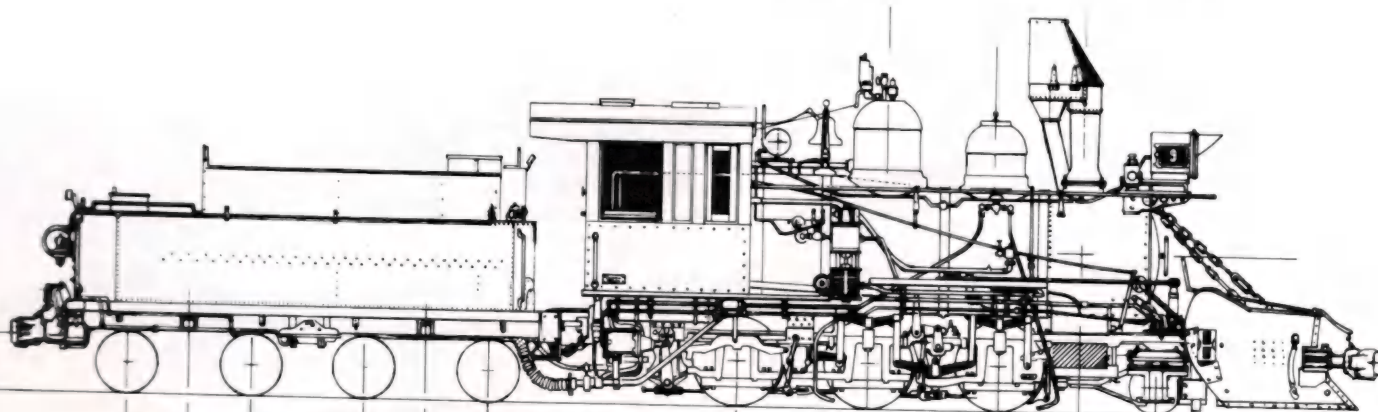
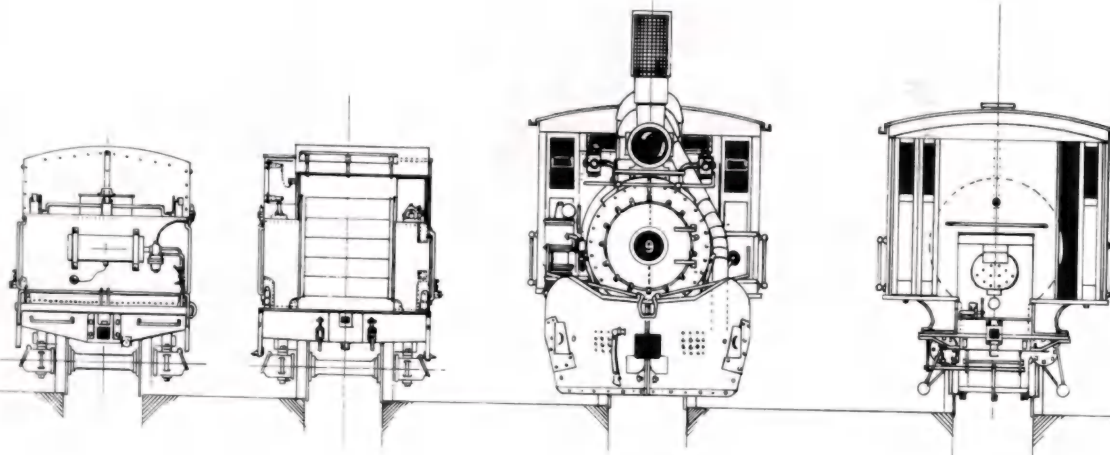
The unmodified Lambert 2-6-0 as it came out of the box. Photo by Bob Brown.

SCALE: 3.5mm = 1 Ft.



© Harry Brunk

C&S #9



C&S #9

der under the running board on the engineer's side offers numerous options. It can be eliminated entirely, or modeled more or less completely, even to the pilot truck mounted flanger itself. Except in winter when they were fully mounted and in working order, the C&S seemed to maintain a casual attitude towards them. Photos of various classes of engines show the pilot deck apparatus mounted with air cylinder and rodding attached but the pilot truck flanger dismounted (apparently stored or being worked over in the shops). That is how I modeled it. Other photos show the pilot deck machinery minus flanger and air cylinder and rodding. Still others show it totally dismounted. A brake cylinder casting (Kemtron, Tomalco or other) is the only direct help you'll get in the way of hardware for modeling the flange gear. Following Figures 6 and 7 and the plans of both engines you should be able to put together a more than passable model of the C&S style engine mounted flanger. Fig. 7 especially shows the

be made with Kemtron or Cal Scale lids and tubes fashioned by you. Mine was a water hatch casting from West-side C-16 tender. *Don't* resolder to tank yet!! The coal bunker is too short. It should measure eleven and one half feet from existing forward edge to back. Removing the coal bunker back proved a little tricky as it and the rear tank top are all one piece. Simply unsolder forward section, pull up carefully and motor tool off the bunker back. The removed back makes a good pattern and support for a new shim brass back with rivet detail. New coal bunker sides of shim brass with correct rivet details are next. Sweat solder over the shorter ones and solder in the bunker back. Drill and solder rear tank top handrails before soldering tool box and water hatch.

The air tank on the rear of the tender needs a triple valve and two good sources are available. Tomalco's passenger car brake set in brass gives you a cast tank and triple valve. The tank is the right diameter but a shade too short for this application. Cal



Fig. 8 — The modified tender.

valve at leading edge of coal bunker. The remaining brake gear could go under the tender if you desire a fuller assembly there. Fig. 8 shows forward end of tender as modeled. Refer to plans and prototype photos for more help.

The tender bed was marked off in one-foot spacings. The motor tool was then used to groove the edges of the bed as seen in Fig. 9. Thin slim

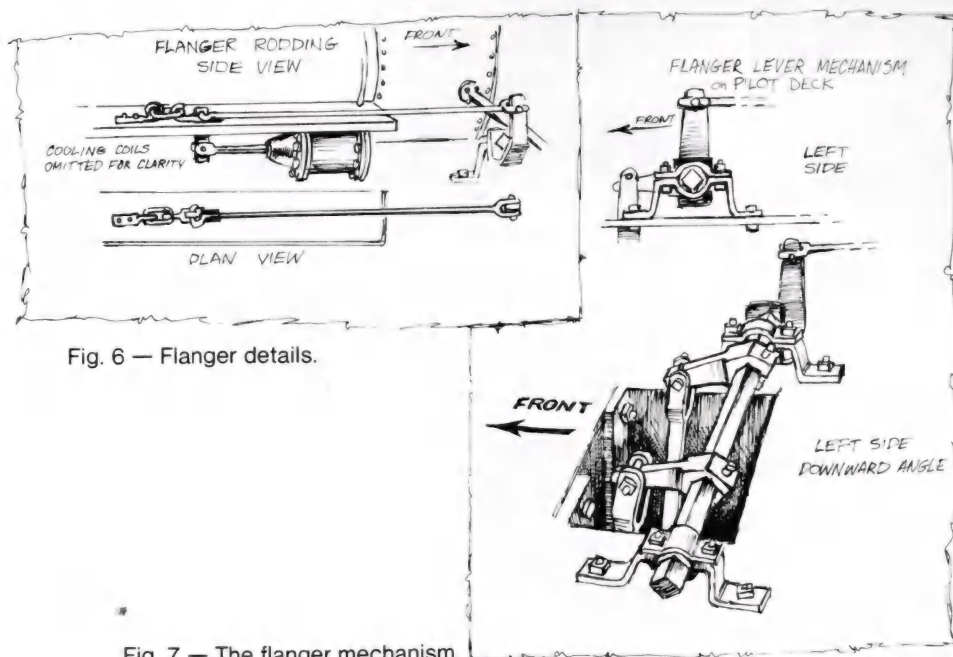


Fig. 6 — Flanger details.

Fig. 7 — The flanger mechanism.

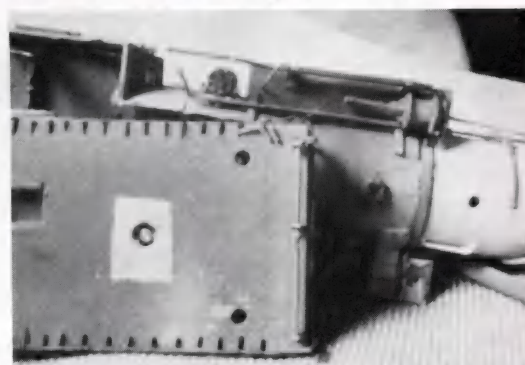
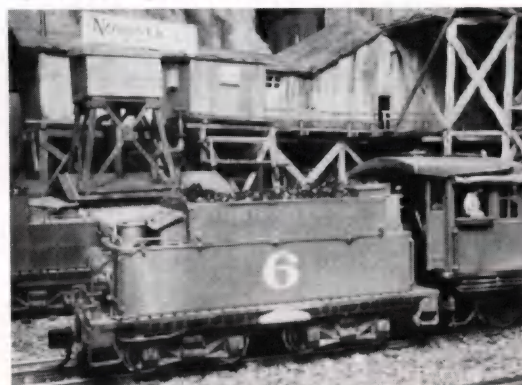


Fig. 9 — The score marks representing wood planks on the tender floor.

brass facing was then soldered along the facing edge of the bed. With the tank in place this gives the appearance of individual board spacing observed on all C&S tenders with the exception of big 74 - 75 and 76. Note shadows on tender frame of #6 in Fig. 10 as well as #71's tender in back-

Fig. 10 — Notice the shadow line caused by the scoring of the tender floor.



mechanical charm of the pilot deck assembly. Fully visible just in front of the smoke box front, it offers a lot for the detail hounds. Modeled even simply as I did on my #6, it adds a nice touch.

The tender water hatch and tool box were removed. The hatch and tube are oval — not round. The tool box is too tall. It could be replaced with Kemtron's #6027 or Cal-Scale #TB-295. I cut it down and resoldered the lid casting. The water hatch can

Scale's Standard passenger car brake set (brass) Type V has a tank too large in diameter and wrong length too, but I have used both on other C&S type tenders without losing sleep.

I decided to keep the Lambert tank and add Cal Scale's triple valve because there was a spare in my stockpile. You need to solder together the appropriate piping (see Photos and Plans). Run a small line from the top of the valve along the engineer's side of tender tank top to retainer

ground. This compares well with photos of the prototypes.

Some time ago Bob Sloan (Robert E. Sloan) and I were discussing C&S tenders and both agreed that a tender patterned after #9 plans would fit well behind most of the B-3-C's. It wasn't until doing the plans seen here for #6 and checking photos under a good magnifying glass that I discovered the C&S threw both of us a curve. On C&S #6's tender there is only a single line of rivets running horizontally down the center of the tender instead of the two rows as shown on the plans for #9. As far as I know—the #6 tender stands alone in this detail among all the B-3-C's tenders. As can be seen especially in Fig. 11, I missed this detail until after my #6 was painted and lettered. The lower line of rivets on the Lambert tender can be carefully ground off with the motor tool for a pretty fair match-up.



Fig. 11 — This photo shows the twin rows of rivets running down the center of the tender for #6. As the author points out this is an incorrect rivet pattern.

Wedged fillets lined up with the tender truck bolsters were fashioned from shim stock and soldered in place on the tender frame. Square tubing could have been cut and shaped for this.

The import truck (See Fig. 12 for this and following detail) sideframes sport leaf spring detail that must be

ground off. The plans and photos show the correct appearance. The wheel sets are very loose in the frames, and, fearing trouble with tender coupler line-up during switching moves, I fashioned a centering device for the rear tender truck. There is a drag on the wheels and testing is still being carried out to see if my solution is good enough to share, so I'll leave you to your own devices here.

Prototype photos of detail common to the B-3-C's are included. They are of #9 the only remaining C&S engine of the class. They should help where words fail.

Bob Sloan now has a set of Cab & tender etchings for C&S engines. The tender etching for #71-73 has the correct horizontal rivet detail and could be used for #6 with small modifications.

References

Chappell, Gordon S., Robert W. Richardson, and Cornelius Hauck, (1974). *South Park Line—a Concise History*. Colorado Rail Annual #12. Colorado Railroad Museum, Golden, Colorado.

Ehernberger, Jschwind (1966). *Colorado & Southern; Northern Division*. B&G Publications, Galloway, Nebraska.

Hauck, Cornelius (1972). *Narrow Gauge to Silver Plume*, Colorado Rail Annual #10. Colorado Railroad Museum, Golden, Colorado.

Kindig, R.H., E.J. Haley and M.C. Poor (1959). *Pictorial Supplement to Denver South Park and Pacific*. Rocky Mountain Railroad Club, Denver, Colorado.

Slough, Leighton (1974). HOn3 Scene. *Slim Gauge News* 4, #3 (Fall).

Wagner, Hol F. Jr. (1970). *The Colorado Road*. Intermountain Chapter, National Railway Historical Society, Denver, Colorado.

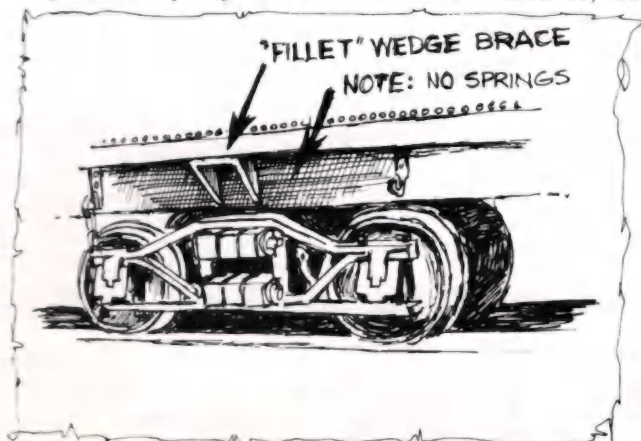


Fig. 12
Details of the
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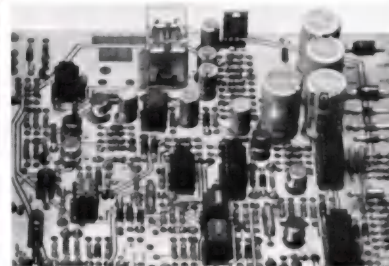
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USING CAN MOTORS TO REPOWER THOSE OLDER IMPORTS

by Bill Wardell
Photos by the author

Can motors are becoming very common in the new imported models. You have probably noticed how they operate much smoother and quieter than the old "open frame" style motors. Most are used with an idler gear box, for a really superior drive system.

Can motors are an excellent means of repowering model locomotives. If properly selected, they will give long, trouble free service. Due to their low operating current they should be operated by a transistor or variable transformer type of throttle. Since they do not cog at low speeds, a pulse type of throttle is not needed. They are also low in electrical noise and work perfectly with sound systems.

Most of us have a collection of older models that use the open frame motors and noisy gear boxes. In this article we will discuss the modification of two different locomotives, An Sn3 PFM/Tomalco, C-16 and a HOn3 PFM C&S 2-8-0. These techniques can be used to modify almost any other locomotive.

But first we will discuss speeds, motor selection, and how to deter-

mine the best possible combination of these for a particular locomotive. By using the "Quick Comparison Chart of Motors" and the SELECT-A-SPEED graphs, this becomes a rather simple exercise.

First we will consider "top speed". There are at least three possibilities:

1. A locomotive will have a top speed that is 1.1 mph per inch of driver diameter. Thus the driver diameter dictates the top speed. This is the method used by the NMRA for judging locomotive operation.
2. All locomotives will have the same top speed. This will allow any engine in the roundhouse to operate with any other, regardless of driver diameter.
3. Classes of locomotives will operate at the same speed. Thus all mainline engines can operate together, but switchers and branchline engines can have a lower top speed.

By selecting one of the three methods above you are now ready to select the motor and gear ratio for your favorite locomotive. (If you are

nervous, make it one of your least favorite.) Let's take one of the two sample locomotives and see how it all works.

An Sn3, PFM/Tomalco, C-16 was selected. This locomotive comes with an idler gear box of 30:1 ratio and a small open frame motor. This combination gives the engine a top speed of 75 mph and a minimum speed of 5 mph. It slows in curves and on slight upgrades.

It was decided that a 1630 motor would do the best job. Its size would just fit into the boiler and the rpm and torque would be a good combination for this engine. A KTM idler gear box with the 37:1 replacement gear set from NWSL was selected to replace the stock box. The KTM box, besides having a high gear ratio, is also fully enclosed. It is a very smooth and quiet box. The stock box could be modified and used, but with its lower gear ratio, the overall operation would suffer.

The motor chart shows that the 1630 motor has a 12 volt no load rpm of 11,000. Using graph #2, a motor speed of 11,000 and a gear ratio of 37:1 results in an axle speed rpm of

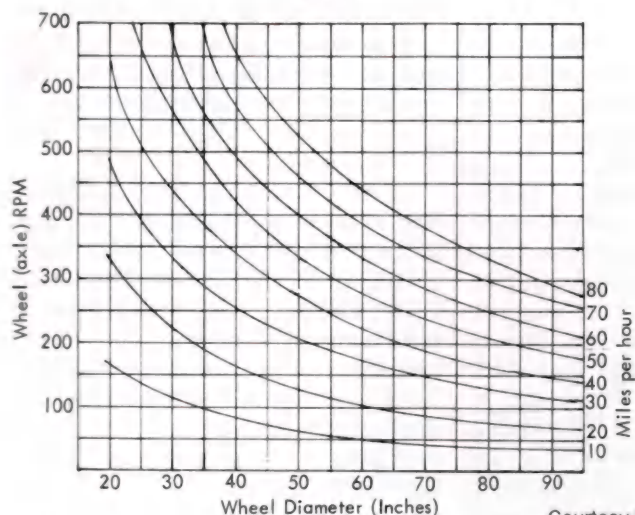
QUICK COMPARISON CHART OF MOTORS

MOTOR	STALL TORQUE		MAXIMUM EFFICIENCY		MAXIMUM SAFE CONTINUOUS OPERATION				NO LOAD 12 volt
	oz-in	amps	oz-in	amps	oz-in	amps	HP	RPM	RPM
1220	.135	.35	.06	.25	.05	.24	.0008	15,500	24,500
1225	.195	.28	.09	.18	.11	.20	.0010	8,000	16,200
1420	.17	.50	.07	.34	.06	.33	.0012	18,200	28,000
1425	.32	.43	.12	.24	.14	.26	.0014	11,500	18,000
1620	.34	.54	.12	.33	.12	.33	.00134	11,200	15,200
1624	.35	.50	.1	.28	.1	.28	.0013	12,000	15,200
1630	.82	.62	.3	.28	.35	.31	.0024	7,000	11,000
2027	.86	.80	.3	.40	.3	.40	.0027	9,400	12,800
2032	1.40	1.12	.4	.36	.5	.43	.0040	8,000	10,750
2224	.63	.84	.2	.37	.25	.42	.0031	12,500	17,000
2231	1.10	.9	.3	.31	.5	.44	.0037	7,400	11,000
2236	1.42	1.05	.4	.32	.6	.47	.0042	6,600	9,800
2240	1.6	1.15	.5	.39	.65	.51	.0043	6,300	9,500
2824	1.45	.99	.5	.45	.7	.52	.0043	5,400	9,800
2830	2.5	1.45	.7	.47	1.0	.59	.0058	6,000	8,200
2835	3.4	1.47	.9	.46	1.4	.67	.0065	4,900	7,000
3253S	5.6	1.25	1.2	.32	2.5	.6	.0055	2,300	3,250
3253W	5.6	2.28	1.2	.625	2.4	1.17	.0095	4,100	6,300

When calculating reduction ratios for model top speed, use Max. safe continuous RPM — not NO LOAD RPM.

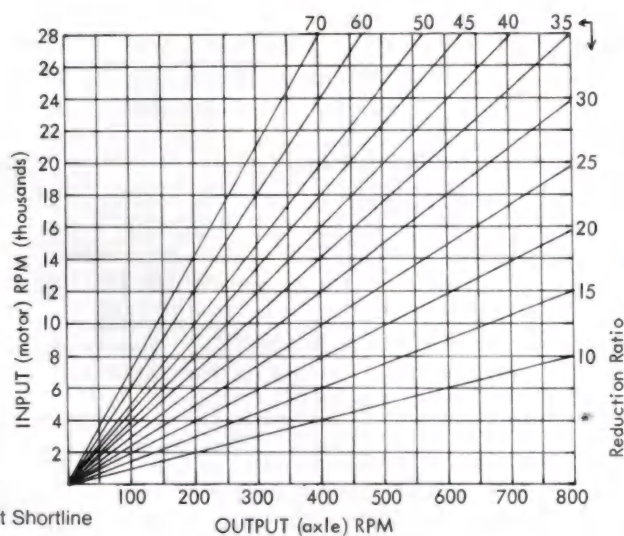
Courtesy North West Shortline. For additional information send 50¢ to NWSL, Box 423, Seattle, WA 98111 for their booklet on Sagami can motors.

GRAPH 1



Courtesy North West Shortline

GRAPH 2



280. Now, using graph #1, an axle rpm of 280 with 36-inch drivers results in a top speed of 30 mph. The actual top speed will be somewhat less than this. It will depend on motor torque and how much it is loaded during operation. The higher the torque the less the effect. Operation has shown that this engine will have a top speed, running light, of 25-27 mph; or a reduction of 10-15%. The minimum speed is about 1 mph, for a much more realistic operating speed range. Performance is also greatly improved in curves and up slight grades.

Now that the parts are selected we will proceed with the modification work. We will start by removing the boiler, motor, and gear box. Set the chassis on a piece of glass and push it back and forth. This will establish a base-line of operation.

Next remove the geared driver set. Remove the driver from the axle with a wheel puller. No wheel puller? A piece of steel with a slot for the axle and a flat area for the back of the wheel to rest upon will do. Use a small drift punch to tap out the axle.

Now remove the gear by tapping on the axle end. Use a piece of brass to cushion the axle end from the hammer blows.

Install the new gear, the brass one, by pressing it onto the axle. I have a hole, for the axle to go into, drilled into one of the jaws of my vise. Be sure the gear is centered on the axle.

Now replace the wheel and requarter. The NWSL Quarterer can be used if it is milled down slightly to accommodate the thick bearing blocks. Check the quartering on all other driver sets, as all quartering jigs are slightly different.

If you do not have a quartering jig, it can be done by eye. Compare the drivers on the axle until they are the same. This method will work if you are careful, but it is a lot more work.

Now that the drivers are requartered, mount the wheels back into the frame and reconnect the side rods. Again push the chassis back and forth on the glass. It should run no worse than when first tested. If it does have any new binds it is probably your quartering job.

If very slow speed performance is desired the chassis should be carefully checked for any slight binds. Even the very slightest bind will cause a noticeable lurch at very slow speeds. There must be an absolute minimum of play in all moving parts.

Check the axle journals for play in the frame; .004" is about the maximum. If there is more, make shims and slip them in between the bearing and the frame. Put all shims on the same side of the bearings. The bearings should still move up and down freely, but have very little back and forth movement.

Next check the side rod holes for a close fit. If there is excess play it is possible to re-bush them with brass tubing. Drill out the side rod holes to the O.D. of the brass tubing. Use a pin vise, to minimize side pressure on the drill that could move the hole sideways, and work with consecutively larger drills. Slip the side rod onto the tubing and file smooth. Now drill out the hole, again using consecutively larger drills. The final drill should be about 0.44" larger than the side rod screw.

Check for and correct any other binds or interference in the chassis.

Again push the chassis back and forth on the glass. If you are satisfied, take a long pencil and hold it by the eraser. Put the point in a screw hole and with the pencil held straight up, move the chassis back and forth. The pencil will act as an amplifier and will detect very slight binds.

Now we will assemble the KTM gear box. Run the cover plate back and forth on the file until it is flat and smooth. Next file the bottom of the box so it is flat and there is very little play on the axle. A piece of 3 mm shaft is handy to check this.

The worm is pressed on the shaft provided, just as the gear was pressed onto the driver axle. Be sure to leave enough shaft to clear the bearing plus a few washers. The worm and shaft should be installed into the box with a minimum of play, use the washers provided.

Install the idler gear on its short shaft. It may be necessary to file a little from the inside of the box to prevent the idler gear from binding. With worm and idler gear installed, but not the axle gear, screw the box together. Check to be sure it runs smoothly and has no binds.

Now install the axle gear and again check for binds. If all is smooth, you may fill the box with toothpaste. Connect to an old motor and run the thing forward and reverse for a few minutes. This will help to polish the gears and bearings and will improve its performance.

Remove the gear box and wash out the toothpaste. If you want to paint the box, now is a good time. After the paint is dry, apply a little LaBelle 110 grease to the gears and 104 oil to the bearings.

Next we will make a saddle to mount the motor. Take a 1/2-inch copper pipe coupling and saw it in two. Now quarter these pieces so you now have eight 1/4 round pieces. One of these will be used to mount the motor.

Cut a piece of 1/16-inch brass stock to fit between the frame members. Drill a clearance hole through the center and drill and tap a hole through the center of the quarter round pad. Screw the plate to the pad and trim off the excess screw. This will allow removal of the motor for servicing. Set this assembly into the frame.

On the end without the electrical connections, cut off the excess motor shaft. Cut almost flush as there is no excess room in the boiler. Hold the end of the shaft in a vise and use a cutting disc.

Cut the other motor shaft and the gear box shaft so they are equal in length. This dimension will depend on the space available in the firebox. Allow about 1/16 inch between the shafts, they should not touch.

Position the motor pad under the center of the motor, with the motor and gear box shafts in line. Solder or epoxy the 1/16 inch brass piece to the frame. Attach the motor to the pad with a Silicone rubber compound such as Dow Corning Aquarium sealer or a bath tub caulking compound. Check for proper alignment of motor and gear box. Let caulking set for 24 hours or more. The caulking will give a silencing cushion between the motor and the frame.

Connect the motor and gear box with a piece of tubing. I use model airplane fuel line, it is very soft and does not vibrate or bind as much as the black tubing supplied with the models. A small piece of foam from the motor box put into the tubing so it will be in that 1/16 inch space between the two shafts, will eliminate the noise caused by the two shafts rattling against each other.

It may be necessary to bush the motor shaft for a tighter fit. NWSL sells bushings for this purpose. They all have an O.D. of 3/32 and an I.D. to match the motor shaft. This must be attached with a very small quantity of ACC type glue. Apply a dab to the end of the shaft and let it run under the bushing. Remember too much and it will run into the motor bearing.

Connect a wire from the frame to one of the motor connections, and from the drawbar to the other. Make

the wires long enough so they can be switched if the engine runs the wrong way. For more reliable electrical contact it is advisable to connect the wire directly to the drawbar and not to the solder tab. Leave a little slack so the drawbar can swing freely.

Apply power and check for operation. With the frame blocked up the motor should start at around one volt, and the current should be around .15 amp. If all is well, the mechanism should be run for a few minutes in each direction to smooth everything up.

Now we are ready to fit the chassis to the boiler. You will have to cut away a part of the boiler bottom to clear the motor. This will not show if carefully done and painted. Be sure that no part of the motor or gearbox touches the boiler, as it will transmit noise.

Put it on the layout and let it run under load for awhile. It should become smoother and quieter as it runs in.

The second locomotive we will discuss is an old HOn3, PFM, C&S, 2-8-0. These engines have the motors mounted in the tender. I replaced the existing motor with the 1630 motor. A new drive shaft was installed to complete the modification.

A pad similar to the one used in the first engine, was installed in the tender and the motor was attached to the pad with the bathtub caulking. Wires were connected between the motor and the tender frame and the drawbar pin.

A drive shaft was made using a Kemtron 163X Universal Set. The dogbone piece was cut in half and the pieces were inserted into each end of a 1/16-inch diameter piece of Plastruct tubing at 90° from each other. The plastic tubing is necessary to prevent an electrical short.

The motor shaft and the engine driveshaft were bushed with the NWSL bushings. When installing the universal socket, be sure the shaft does not extend into the area where the ball will be. If they touch it will cause noise. When the plastic tubing is painted black it is not too obvious, cab curtains would hide it even more. Since the shaft is jointed at each end, it will not bind or cause extra friction even on very tight curves. The tender will not shake because the motor and drive shaft are much smoother operating than the stock drive.

Without a motor in the boiler, this space can be used for lead. When adding weight, be sure to check for balance. With the smooth operation of the can motor and the extra weight in the engine, it will now pull a very nice size train.

After completing this modification I was very pleased with the performance, but I had electrical pickup problems. The engine would run only a few feet and then lose contact. I tried sliding shoes, but they were not a complete solution. They squeaked, used a lot of tractive effort, and got dirty very fast.

After a lot of testing it was found that the locomotive drivers were losing contact. However, neither engine has stalled since I worked out the following solution.

A Grandt Line, 7003, pickup shoe for a Kemtron Shay was mounted on one tender truck. This is a piece of phosphor bronze with a plastic insulator in the center. A very small wire leads from this and is connected to the motor.

To mount this part on the truck it will be necessary to drill and tap a hole in the truck bolster. Cut a little off each end of the bronze blade to minimize the chance of shorts. Screw it to the bolster so the edge of the flange, of the insulated wheels, will rub against it. The edge of the flange has much less friction and stays clean. Very carefully adjust the tension, by bending, so it just touches the flange. The wheels should almost turn when only the truck is pushed.

It will be necessary to remove a little framing under the tender to clear this shoe. Once it is installed it will be out of sight up under the tender. Connect the wire, with enough extra for free movement of the truck, to the motor along with the wire from the drawbar pin. If you are using this shoe on a locomotive mounted motor, it will be necessary to run a separate wire to the locomotive. A quick disconnect would be handy.

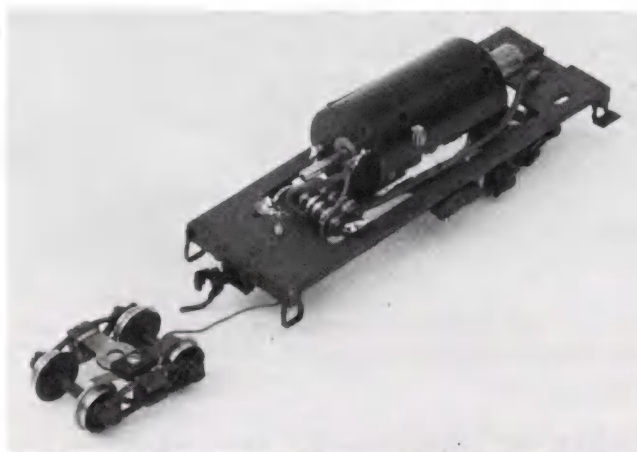
The final results are a top speed of 46 mph and a minimum speed of 0.2 mph. This engine and the C&S 2-6-0 are now really fine performers. Due to the oversize motor, the slow speed performance is fantastic, 0.2 mph equals 36 seconds per driver revolution. However, due to the torque to weight ratio there is a problem at higher speeds getting the two engines to work together.

For best slow speed performance, the higher the torque the better. Small binds in the mechanism or from the trackwork will be minimized. However, at higher speeds, unless the speeds are almost identical, a double-header will have one engine slipping its drivers. At these speeds a lower torque motor would "load down", reducing the speed and stopping the driver slip.

There is a way to get locomotives with slightly different top speeds to work together. I have improved the operation on my narrow gauge locomotives that have different top speeds and starting voltages.

I used the locomotive with the highest starting voltage as the "standard". To the other locomotives I added a resistor in series with the motor, to achieve the best combination of starting voltage and top speed.

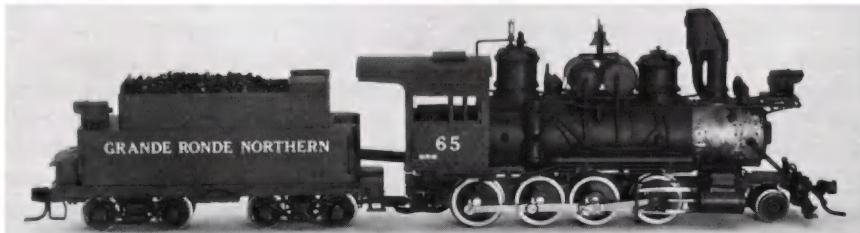
The resistor acts as a current limiter, causing the voltage to the motor to drop when the load is increased. The end result is somewhat similar to having a motor with a lower torque. A resistance of 10 ohms seems to be a practical limit. Diodes could be used in a back-to-back configuration, if you just want to raise the starting volt-



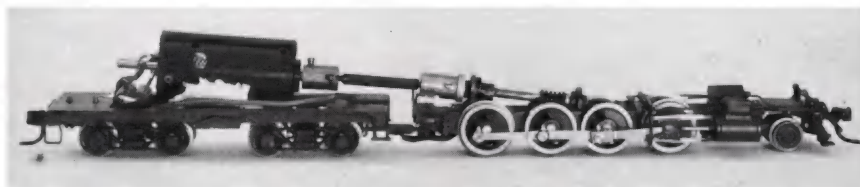
The modification to the Colorado & Southern 2-8-0 tender truck, showing the Grandt Line Shay pickup shoe installed on the insulated wheels. Also, the resistors, described in the article, can be seen at the end of the motor.



The Colorado & Southern 2-8-0 working up the 3 percent grade of Windy Point on the author's Grande Ronde Northern. This engine can handle six 2 ounce cars up this grade.



The Colorado & Southern 2-8-0 as modified, showing the driveshaft. Cab curtains could do a lot to hide it.



The mechanism of the Colorado & Southern 2-8-0 after modification. The pickup wiper is on the side of the rear tender truck and is completely out of sight.



The Denver & Rio Grande 2-8-0's showing the before and after drive systems.

age. This would also lower the top speed, but would not affect the torque.

Probably the best thing you could do to improve the performance of any engine, is install a flywheel. Neither engine modified for this article had enough extra room for one, but I have put flywheels in other engines I have done. The biggest effect is in smoothing out the engine speed as it moves along. There is some coasting effect, but not as much as the plastic diesels. Starting and stopping is improved noticeably. Timewell Precision Flywheels are made to mount directly on the can motors.

A few final notes: The KTM gearboxes are distributed by Precision Scale Models, PSH-4018. NWSL has a 43/1 idler gearbox with 3 mm or 1/8 inch axle, for engines with 70-inch or larger drivers. The part number for the NWSL 37/1 replacement gear set is 104-04.

Oil the motors very sparingly with LaBelle 108 plastic compatible oil. One drop every six months is probably enough for the average amount of operation. Too much oil and it will get on the commutator.

There is nothing really difficult about any of this. The improvement in operation is amazing. There is no question that the effort required to make the conversions is worth it so give it a try.



HOn3 Tank Cars Made Easy

The Pacific Coast Railway used a number of tank cars similar to the one described. Ted Wurm provided us with this view of two Union Oil tankers sitting at Santa Maria, California in April 1938. Photo, collection of Ted Wurm.

by Gene Deimling

Combine one HOn3 flat car with a Model Die Casting tank car body and you'll end up with a neat freelance tank car. Many of you probably already have the necessary ingredients gathering dust around the shop. It is not essential to be an accomplished scratch-builder to successfully complete this project.

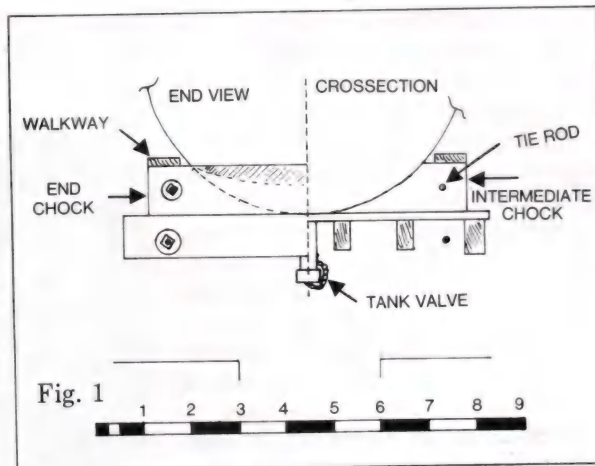
As I have already indicated, there is no exact prototype for my car. That should not be much of a deterrent to you since it is similar to cars on a number of narrow gauge lines. The Nevada California, Oregon RR, Eureka & Palisades, CONX #5 (Colorado lines), Nevada County Narrow Gauge, South Pacific Coast, Southern Pacific Narrow Gauge, Pacific Coast all had tank cars of a similar design. The prototype photo included is of a Union Oil tanker operated on the Pacific Coast Railway. Actually, there is no reason why standard gauge modelers can't follow the same techniques and build a similar design car.

I started my project by building the flat car up from a R. Robb Ltd. 6000 series D&RGW kit. I encountered no problems in assembly following the instructions. You will have to make a tank valve (drain) to complete the under frame detailing. It can be turned from a brass or plexiglass rod. A typical valve fitting is shown in figure 1. The valve is mounted about nine inches off the center of the dome,

lengthwise. Don't forget to add the length of chain running from the cap to the stem of the valve.

Next, I tackled modifications to the tank body. I used the tank from a HO gauge old time Model Die Casting tank car kit. Start by cutting off all the cast-on grab-irons and handrail posts. Before you take a blade to the body, mask off the rivet detail around all the parts to be removed. Spending some time applying masking tape will save you time and trouble in the long run. The handrail posts can be removed quickly with Lambert rail-cutters. The grab-irons were removed with a flat file. Finish up the surgery with some 400 grit sand paper. The few holes in the body can be filled with some plastic-type body putty. Next install the dome top and tank ends. I suggest airbrushing the tank body with floquil gray primer. The flat gray color will allow you to detect errors in workmanship quickly. Set the body aside and move on to the chocks.

Chocks are the various wooden blocks which hold the tank in place. I made mine from .060" X .120" styrene strips sold by Evergreen Scale Models. The end chocks are 6 feet 8 inches in length. The intermediate chocks are curved to fit the tank body. See figure 1 for a graphic representation of the chocks. Most prototype tank cars of this type have tie rods running between



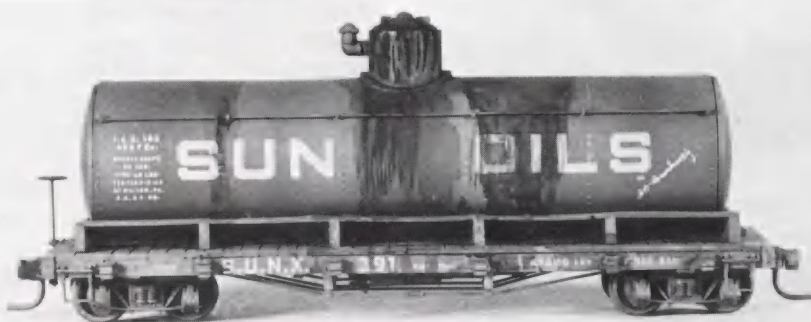
the end chocks. I used .015" wire to simulate the prototype rods. All of the chocks have to be drilled to allow the passage of the wire. At this point, I suggest adding a wood-grained effect to the chocks. Drag a Dremel wire wheel lengthwise on the pieces to simulate the grain.

Now you are ready to mount the tank on the flat car. Thread two pieces of .015" wire through the chocks and position them on the deck. Center the end chocks on the deck and flow some MEK (Methyl-Ethyl-Ketone, available at your local paint store) around them using a small paint brush. Make sure the end chocks are far enough apart to allow the tank body to fit. Now, set the tank in place and apply some MEK around the ends. Next, position the intermediate chocks directly above the stake pockets and glue in place. I installed running boards made from 2 inch X 8 inch strips on top of the chocks.

The application of handrails to the tank body is next. I used some .010" wire and Detail Associates diesel lift rings (used as posts). Location of the posts is critical but it can be done easily if you use a PFM vernier caliper to mark their location. Use the bottom of the side sill as a reference point.

Paint the car in your choice of colors. Apply decals of your choice and weather to suit. My model is weathered with casein paints (oil spillage) and pastel chalks. If you use silver paint on the tank body, make sure you seal the finish before attempting to apply the decals. Silver paint oxidizes badly and will prevent the decal film from sticking.

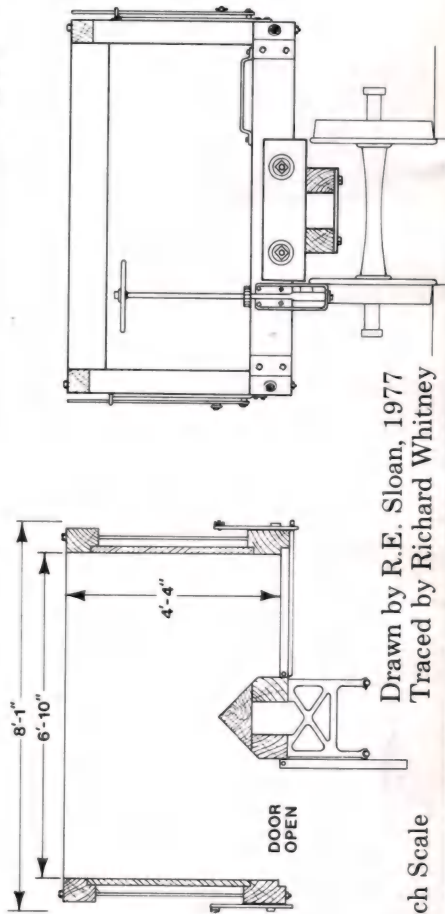
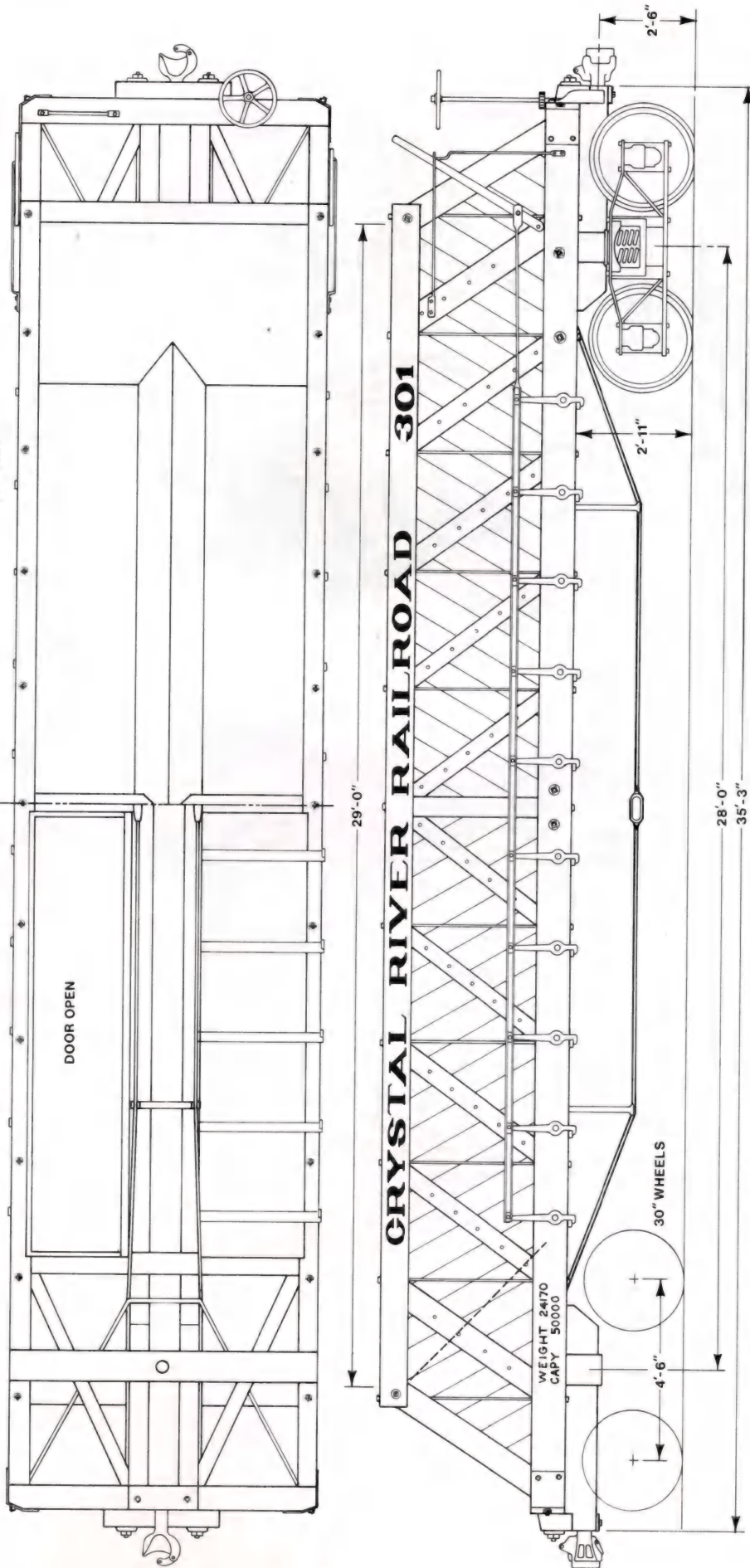
Your tank car should now be ready for service. I hope that you enjoyed this article. My next project will be scratchbuilding a D&RGW 40 foot narrow gauge reefer using Evergreen's excellent styrene material.



Ingoldsby Patent Dump Car

BOTTOM VIEW

TOP VIEW



Two of the 41 Crystal River drop bottom gondolas at Redstone, Colorado in the spring of 1909. The car at the left had the doors closed, the one on the right had the doors open. Both cars were renumbered in the 900 series by the Denver and Rio Grande. Photo by A.L. Beekly, U.S. Geological Survey. Collection of R.E. Sloan.

Drawn by R.E. Sloan, 1977
Traced by Richard Whitney

1/4 Inch Scale



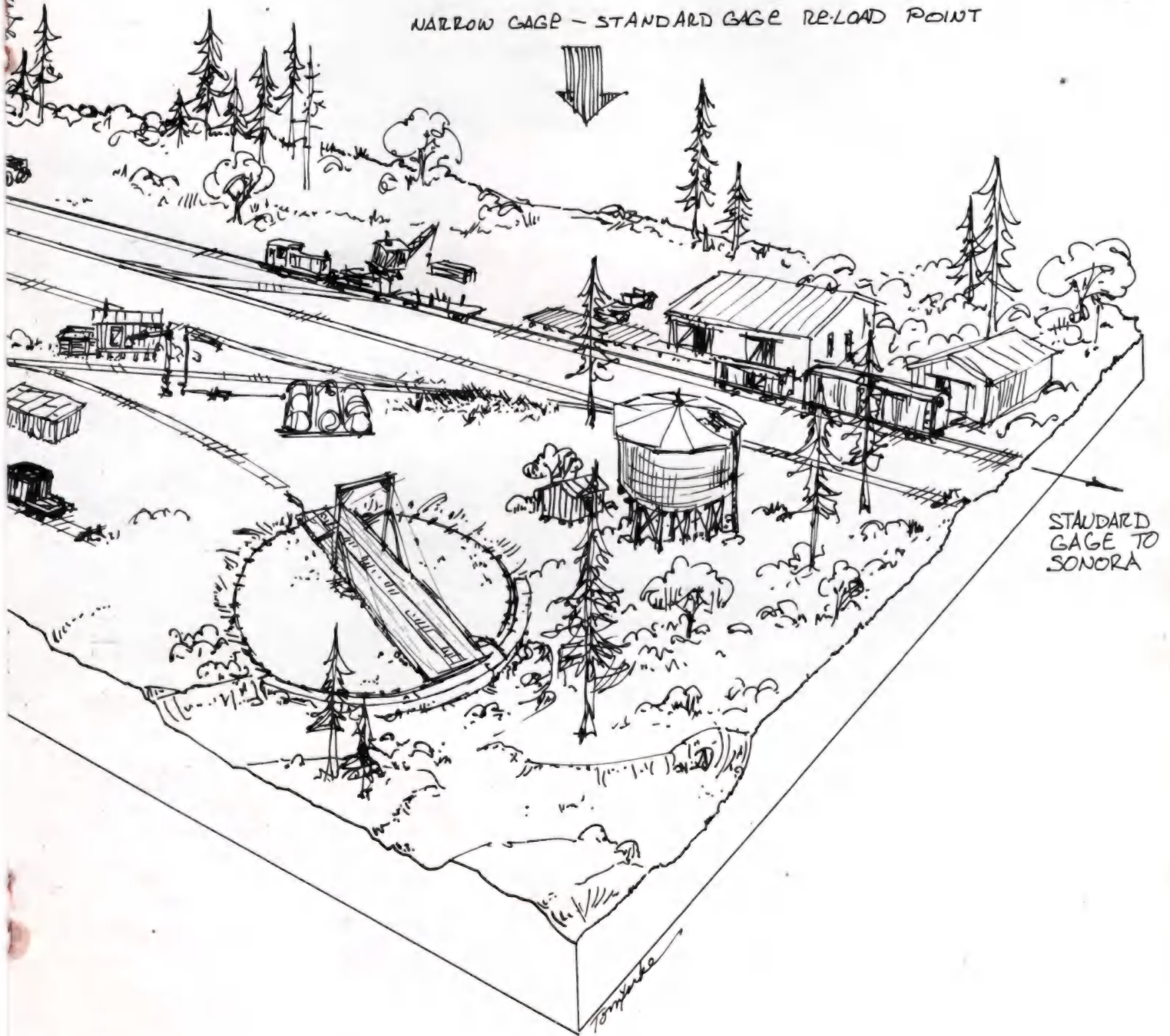
N. G.
TO LUMBER
ROAD'S MILL

On-3 NARROW GAGE SHORTLINE TERMINAL

BY TOM YORKE 4-18-74

TOTAL SIZE TO DATE ~ 3' x 12'
BUILT IN 3 SECTIONS WITH OTHERS
TO FOLLOW. THESE WILL INCLUDE LUMBER
CAMP ON MOUNTAIN SIDE & LUMBER MILL & RR
SHOPS. LUMBER ROAD USES ALL GEARED ENGINES.
MODEL REPRESENTS 1925-1930 PERIOD IN SIERRAS
JUST OUTSIDE OF SONORA. STANDARD GAGE CONNECTION IS
WITH SIERRA RAILROAD.

NARROW GAGE - STANDARD GAGE RE-LOAD POINT



STANDARD
GAGE TO
SONORA



The Point Ellice Canadian National Car Ferry Slip

by Brian D. Pate, North Vancouver, B.C., Canada
Photos by the author

Building this HO scale model was a project that got out of hand. It grew out of my interest in rail-maritime operations in general, and ferry slips in particular. Also the Burrard, Delbrook and Pacific Railway in my basement needed a slip to service a car-ferry operation.

Then a friend, Al Lill, introduced me to the prototype, which was built in 1927 and still functions today, even though a little weather beaten and dilapidated. This Ferry Slip fits the short-line theme of the **Gazette** since currently it is the way into and out of the vestigial few miles of industrial trackage that the Canadian National retains in the harbour area of Victoria, B.C. This is on the other side of the 30-mile wide Georgia Strait from

GAZETTE

the 3,000-mile network of the CN on the Canadian mainland.

For me it was love at first sight — a cutter slip would be difficult to imagine with the toy-castle turrets atop the counter-weight towers, and the 3-way stub switch on the apron, not to mention moss, sea-gull droppings and a general reek of atmosphere. Like many infatuations, this one involved many visits (5 over the space of 5 years) and scads of photographs (117 in all, mostly Kodacolor). While various friends shivered in the rain holding the other end of a tape-measure, I clambered over and measured as much of it as I could reach. On one never-to-be-forgotten day I gained access to the inside of the machinery house and photographed and measured everything in sight.

Then came the drawing of plans, from my measurements and counting boards on photographs and the like, and with the plans came a profound respect for the people who routinely draw such plans for model magazines. Later I acquired copies of some CN drawings made at the time of a rebuilding in 1935, which gave details of the main timber framing of the super-structure, and also the layout of steel beams on the apron, both of which I had had to guess at.

Finally came construction of the model, taking the better part of one year's leisure time, culminating in the heady experience of taking first place in displays at the Denver, 1977, NMRA Convention.

I decided from the start to build the model as close to the prototype as possible, and with as much of it working as I could achieve. There were no compromises on the slip proper; the approach trestle on the model is shorter than on the prototype and is on a grade in order to fit into the available water-front space on the layout. In addition it was to be as close to 100 percent scratch-built as possible (the only commercial parts being several hundred Grandt NBW castings, some chain, brass and ABS tubing, and code 55 nickel-silver rail); also the construction techniques were to be prototypical — sort of super-board-by-board. Finally I had to choose an era, since bits and pieces had fallen off or been changed over the 50-year life of the prototype. I ended up in 1936; this was just after the rebuild that gave the structure the very prominent 12 inch \times 12 inch diagonal braces, that are such a distinctive

feature of the gantry today. Also it allowed me to use the then current CN structure paint scheme of box-car red with cream trim, rather than the modern white with blue scheme which has so badly faded in the marine atmosphere. To add interest I chose to model roughly the mid-point of the 16-foot tides experienced in Victoria inner harbour, and a fairly windy day.

I started by driving piles (dowels creosoted with Floquil weathered black) into the water of textured plaster on plywood. After a suitable interval barnacles appeared from the high-tide line down (from fine sand and diluted white glue). Then for the gantry and trestle framing, floor planking, stairs and hand-rails, I cut my own pine strip-wood in HO scale sizes from 2 inch \times 4 inch to 12 inch \times 18 inch. This was either creosoted or weathered with black shoe dye in alcohol. The gantry verticals were keyed to the piles with hardwood keys, and then through bolted. Here and everywhere else, Grandt-line NBW castings went on **both** ends, so as to look right after the white glue dried and became invisible. Then the rest of the framing went together the same way in a burst of enthusiasm — and lots of fun. The walls of the machinery house (on the bridge over the apron), the towers, and the little houses down at apron level were of fancy siding on the prototype, and of scribed

styrene on the model (which I scribed myself on *both* sides). Complete interior framing with styrene 2" \times 4" studs then followed together with nail holes everywhere appropriate. Windows were of transparent styrene with muntins and frames of ACS adhesive drafting tape. Some panes were "broken" as on the prototype. The roofs were constructed similarly with the prototype's incredibly light rafters of 2 \times 4's; roofing felt was applied via Kleenex painted down with Floquil grimy black.

Then I turned my attention to the apron made from steel-riveted beams on the prototype, styrene on the model. I built a rivet press (of the drop-hammer variety) to impress the rivets, and went the whole hog, riveting up the beams and gussets of the structure even in places like the underside of the apron where they don't show except to the snooper who slides a mirror underneath. The apron is hinged in two places; I was delighted to discover that .020" styrene is robust enough so that scale pivots made of 00-90 screws did not tear out under the weight of the largest and heaviest cars I have.

The ties I sheared from PC board of thickness and length called for in the original CN bill of materials. Epoxy fixed the PC material to the styrene beam system, and the code 55 rail was soldered down to form the 3-way stub switch. This was made to work together

You can see why small details make a difference. Notice the use of nut and bolt castings and the interest created by the small structures on the deck. Each small building has its own interior detail.





This overhead view shows the intricate detail on the steel girders of the apron. Note the rivet detail and the decking. The deck is carefully fitted but still looks weatherbeaten.

attachment with contact cement). Where doors had padlocks on the prototype, they exist on the model — fabricated from chain link.

Both the water supply to the fire hose and supply valve on the gallery and the power lines are run back along the trestle to a shore connection. There are two power circuits — for lighting and for running the hoist system. Finally, everywhere there are traces left by seagulls (from white Floquil), especially on favorite roosting locations such as the ridge of the main roof.

From the photographs of the model it is easier to figure out how the machinery functions than it was from inspection of the prototype. On both the prototype and model, the weight of the front part of the apron is not quite balanced by the counter weights. To raise the apron, the operator engages the large gear in the large circu-

with the switch stand turned from brass rod on a lathe and seems to pass all kinds of freight cars without derailments (thus far).

My inexpert lathe work also produced the various sizes of sheaves for the hoist system, including those in the diamond-shaped blocks (the rest of which were made from styrene and brass wire). The concrete counter weights were fabricated of styrene and plaster. The steel cables are nylon thread. The whole system works within the limits imposed by the non-prototypical friction in the model sheave systems of course.

The bits and pieces of machinery were fabricated from brass tube and wire, styrene, machine screws, and chain, lamp shades are from tooth paste tube material, lamp bulbs and door knobs from melted fibre optics material, the fire hose from flattened solder, weeds are dyed string and ground rubber foam, power lines are from invisible thread, life buoys are from ABS tubing and thread. Junk in the machinery house was modelled as it was in 1976 during a repainting operation. There is a fire extinguisher, and orange life vest, and notices on the wall. All the doors have door knobs inside and out plus hinges and hinge pins, and all swing (thanks to

This overall view shows the dolphins, the arrangement of the structure and the base of the model. Notice how the pilings are cabled together.



lar casing in the machinery house which drives, by a shaft going through the front gallery. This pulls in the cables, which run via sheaves to the two-part hoist system attached by chains to the lifting beam.

When the car ferry arrives, butted in between the dolphins and going slowly ahead on its engines, the operator lowers the apron by the reverse of the above operation, until the apron end enters a matching recess in the ferry deck. With its weight supported by the ferry, the chains go slack. Excess chain is contained in the buckets on top of the lifting beam. Three tracks on the ferry match those diverging from the 3-way switch on the apron. The operator can see what he is doing through a trap door in the floor of the machinery house.

The operator then raises or lowers the joint between the first and second apron sections so as to minimize the angles there, and at the connection to the trestle. This he does by powering the transverse shaft in the machinery house, which gears to vertical shafts down the towers, which in turn gear to horizontal shafts leading to the smaller of the little houses at apron level. These contain 4 to 1 chain reducers (modelled), and the drive is then transmitted by more shafting to the larger of the little houses, which contain screw jacks (also modelled) which raise or lower a transverse 36 inch I beam supporting the apron at this location. The operator judges this operation through the rear windows of the machinery house, watching the vertical pole which is attached to the transverse beam and its pointer which is attached to the roof of the adjoining house. Red marks on the pole show the limits of travel of the screw jacks.

The loading operation would cause the ferry to change its height out of the water, and this is followed by the hinged apron sections. Loading of the side tracks on the ferry would cause some listing; the cross bracing in the steelwork of the apron appears light enough to allow the structure to twist enough to accomodate this within limits.

In addition to Al Lill who showed me the prototype, several other friends contributed to the building of this model. Frank McKinney taught me how to cut stripwood, scribe styrene, and use ACS tape for windows. Ewan Callendar lent me drawings and shared the experience of visits to Victoria. Al Furmedge made sure that the model



The back of the hoist house. The stair structure adds interest to the model. The window arrangement, pipes alongside the structure, and the electric wiring all refine the detail on this model.

conformed to appropriate Canadian maritime regulations, and that my barnacle encrusted high-tide line was level.

It will be noticed that there is a trapezoidal section of "water" which lifts out between the dolphins. That will accomodate the next layout section which will house the car ferry. Present

plans are to construct the "Canora", which used to dock at this slip for much of the last 50 years. In HO scale she will be about 3 feet long, and accomodate 24 average freight cars. But that is a project for a little later, after the personal perturbations caused by the present project have died down a little.

The interior detail of the hoist house. The electrical wiring is shown clearly as are the machinery details. Notice the use of nut and bolt castings and the weatherbeaten appearance of the wood. The weathering is not overdone, but is just right. Knowing when to stop weathering is a very important skill.



The MODELMAKERS NOTEBOOK



by
AL ARMITAGE

WHAT DO YOU KNOW ABOUT BRICKS?

Certainly, one of the most interesting, and versatile of building materials is the common brick. Both sturdy and durable, the brick building can be found in all types and sizes, plain and fancy, in every part of the country. Around a railroad, they are an essential part of the scene, in one form or another, so, if YOUR model pike doesn't have some brick structures on it, you are missing some of the flavor of the prototype.

Though not particularly difficult, brick buildings are one of the more tedious types of construction to scratch-build. They are, also, one of the most impressive kinds of structures to model. And they don't, necessarily, have to be large structures to be impressive, either. A small, neatly designed and properly built brick building is an eye-catcher every time.

Like everything else, if you are going to model brick buildings, it helps to know something about the construction of the prototype so let's talk a little bit about bricks, and how they are put together to make a building.

Fig. 1 shows the dimensions, and nomenclature, for the various forms of standard, or "common" bricks. In each case, the shaded side of the brick is the one you, generally, see on the outside of a wall. The one exception is the "king closer," where the opposite face is outside. This shape (like all the other partial bricks) is broken to size on the job to suit the situation at hand. In Fig. 2, you can see where several of these partial bricks are used. The "soldier" brick is merely a standard brick standing on end. It was used, primarily, in decorative brick work at cornices, lintels, etc. The "header" and "rowlock" were used to tie the inner, and outer, sec-



The header bricks and how they tie the wall sections together. Photo by Ron Morse

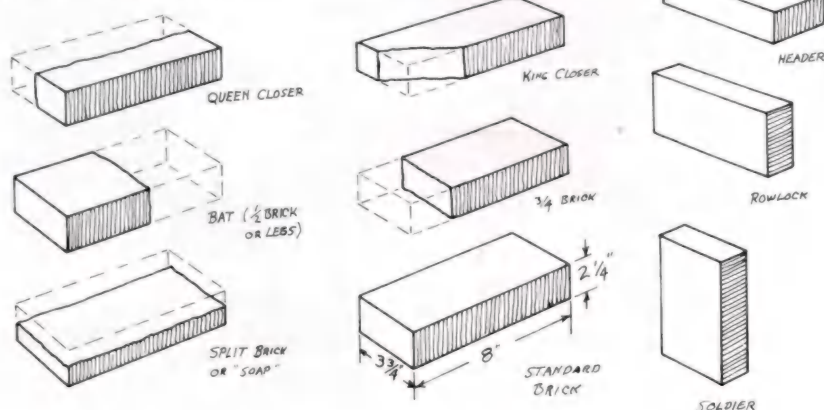


The same wall at a window. This is an unusually heavy wall in a building in Blackhawk, Colo. Probably to withstand the severe winters with heavy snowfall! Photo by Ron Morse

tions of the wall together, as shown in Fig. 2.

Each row of bricks is called a "course" and some of the more common patterns of brick work are shown in Fig. 2. There are others, of a more decorative nature, but those shown are more appropriate for commercial structures of the kind found near railroad tracks. The most often used pattern, shown in A & B, is called, logically enough, "common"! The course called "header bond" is easy to spot because of the solid row of header

Fig. 1 Brick Nomenclature



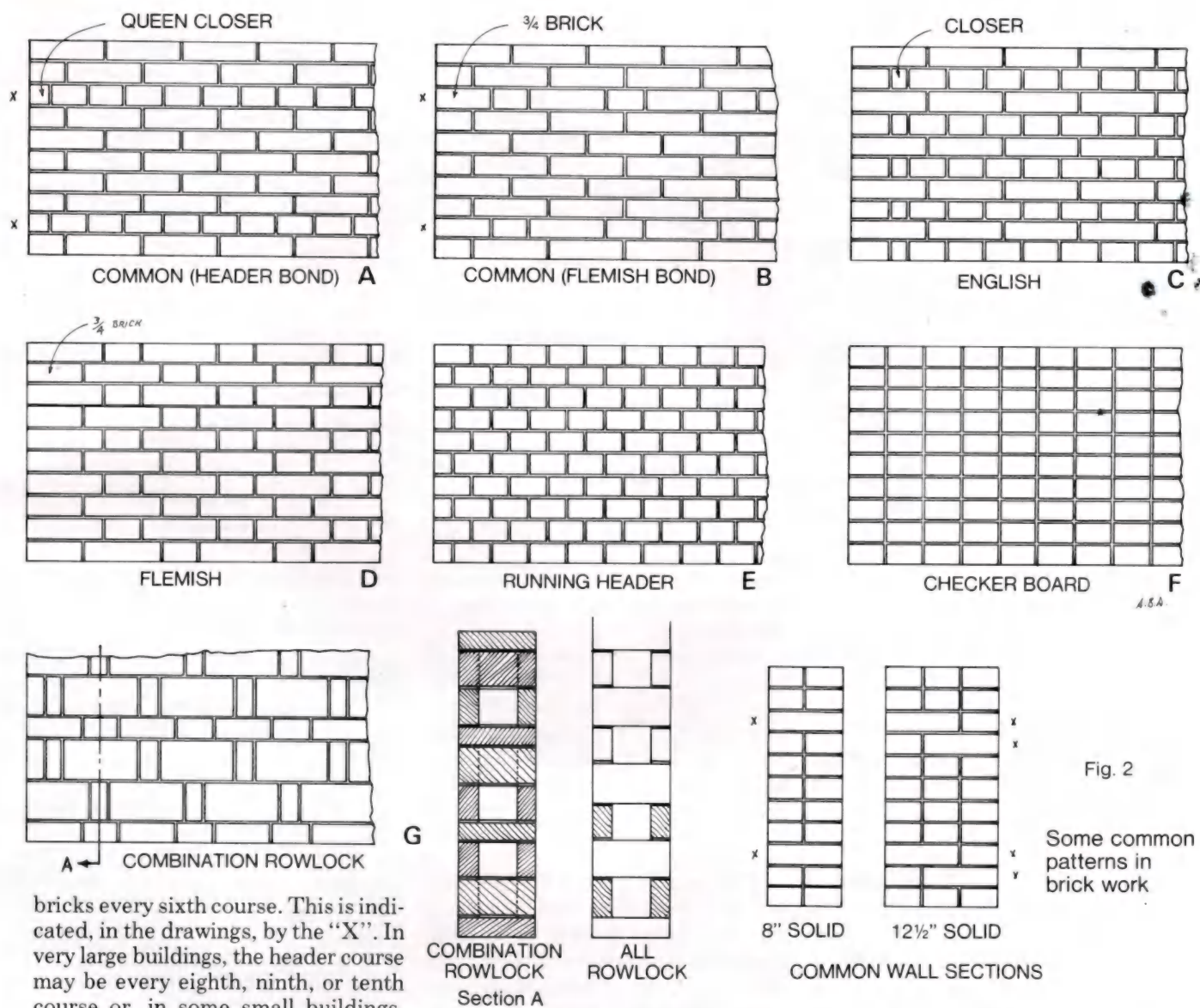


Fig. 2

Some common patterns in brick work

bricks every sixth course. This is indicated, in the drawings, by the "X". In very large buildings, the header course may be every eighth, ninth, or tenth course or, in some small buildings, every fifth course.

The "Flemish bond" has alternate header bricks every sixth course while the "English" pattern (C) uses header bricks every second course. The "Flemish" pattern (D) is similar except that the headers occur in every course. The "running header" pattern (E) is found, mostly, in small buildings and open, low-walled enclosures. This is made by laying the bricks side-by-side. A wall of this type is only as thick as the length of a single brick, thus, not as strong as the double wall construction of the other patterns. The "checker board" pattern (F) is more typical of modern structures since it's geometrically precise configuration lends itself well to the so-called "functional" design of most modern buildings. The mortar is, usually, "raked" or "stripped" in such walls. (See Fig. 3)

The "combination rowlock" pattern (G) is not often used in industrial buildings except in conjunction with

stone, or tile, facing. As can be seen, this pattern has standard headers every third course along with rowlock headers in the first and second courses. (See Section "A" in Fig. 2) The "all rowlock" style is similar except that the standard header course is omitted. Both of these walls have cavities, or hollow areas, between the front and back section whereas the other styles don't.

Bricks are made of clay and come in several colors. The most familiar, or course, is the old-fashioned "red brick" which, actually, was made in a variety of shades from pinks to browns. Most industrial structures were made with this type of brick.

Another common use for red bricks was pavements and sidewalks. Had you ever considered that? Might look pretty good on a model railroad, don't you think?

For city store-fronts, public buildings, banks, schools, etc., white, or yellow, bricks were favored. Some-

times these were glazed, sometimes not. And, of course, many brick buildings were painted, especially in later years.

Most red bricks were smooth, but some were "brushed" to impart a "striated" texture to the outer face.

Bricks were often combined with cut stone blocks, in the "classier" buildings, as shown in Fig. 4. This would be suitable for a bank, library, or office building, to name a few examples.

Mortar was the "glue" which held the bricks together. It was, usually, white since it was made of lime and sand, especially in the earlier years. It was applied with a trowel and the brick pressed into position causing the excess mortar to squeeze out from between the bricks. This excess was scraped off, as the wall progressed, and was either left flush or shaped to one of the configurations shown in Fig. 3. Special tools, called "rodding" tools, were used for this and the shape

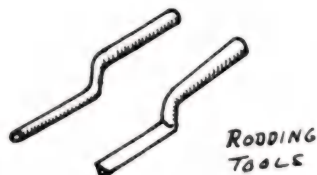
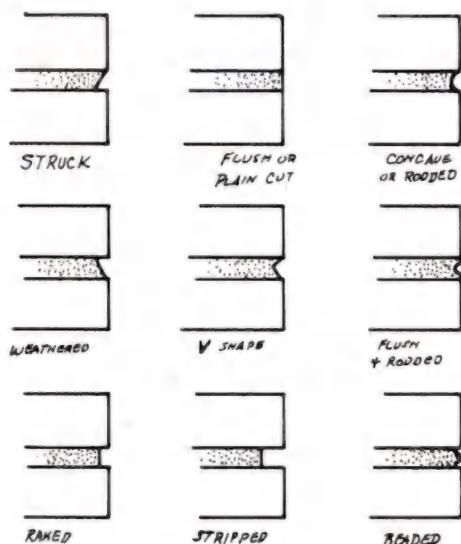


Fig. 3 — Types of Mortar Joints

depended on the "class" of the building. Most industrial buildings were either plain cut or concave. The other shapes illustrated were more apt to be found on dwellings, office buildings, and the like. This information is of no great value to the modeler, of

course, since it is next to impossible to reproduce these shapes, even in "O" scale!

Sometimes, lampblack was added to the mortar to give it a gray color. And the effects of age, weather, and soot darkened the mortar in old buildings to the point where it was hard to tell just what the original color was. In more modern times, cement was used for mortar and this was, normally, a light gray.

The mortar joint was, generally, $\frac{3}{8}$ " to $\frac{1}{2}$ " thick but could be more, or less. This should be taken into account, along with the dimensions of the brick, when designing a building! Regardless of the pattern used, each course will have a certain number of bricks

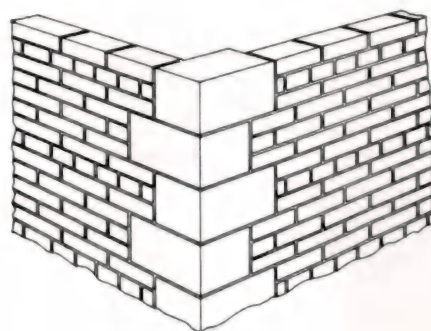


Fig. 4 Cut Stone Quoins

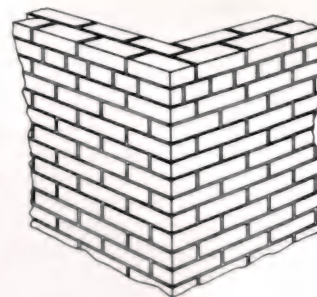


Fig. 5 Corner Details

Table of Brick Sizes

STANDARD:	12" length x 2 and $\frac{1}{4}$ " x 3 and $\frac{3}{4}$ "
NORMAN:	12" length x 2 and $\frac{1}{4}$ " x 3 and $\frac{3}{4}$ "
ROMAN:	12" length x 1 and $\frac{5}{8}$ " x 3 and $\frac{3}{4}$ "
BABY ROMAN:	8" length x 1 and $\frac{5}{8}$ " x 3 and $\frac{3}{4}$ "
TWO-BRICK type:	5" high x 8" x 3 and $\frac{3}{4}$ "

PLUS the mortar between, both vertically and horizontally, and must match at the corners as in Fig. 5. This is the tricky part of modeling brick buildings!

There are other sizes of bricks, too, as shown in the table. However, these sizes are not too common in industrial buildings although the "Norman" size was sometimes used in large "mill-type" buildings.

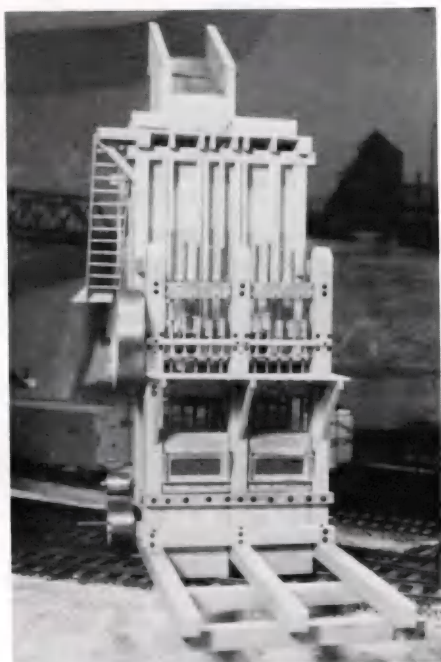
So, there you have the basic fundamentals of brick construction. Possibly, more than you really wanted to know but, at least you'll know what I'm talking about in the future! Next time we'll take up the subject of doors, windows, cornices, and other details of design in brick structure.



An example of "raked" mortar joints. Note the "header" course at the lower edge of the window. Photo by A. B. A.



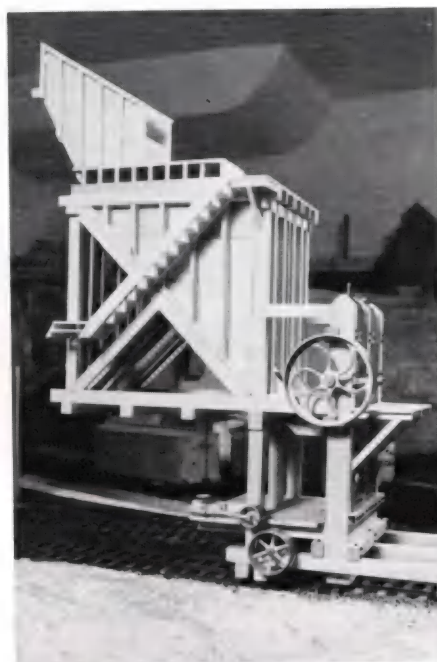
This shows "concave" mortar joints on the back of a building in Medford, Ore. Note the joint line where two sections of the building meet, at the right. Photo by A. B. A.



A front view showing John Robinson's stamp mill. Notice the hopper doors at the bottom and the stamps. *Photo by John Robinson.*

ASSEMBLING THE BROMMER STAMP MILL

by George Konrad



A side view of John Robinson's stamp mill. The hopper shows clearly as do the various pulley wheels and timbering. *Photo by John Robinson.*

CHB Models (Charlie Brommer) has made several excellent kits available to the O scale modeler. One of these is the stamp mill hardware kit; the following is a description of the assembly of Charlie's parts.

Except for the brass rod and NBW castings the kit contains all the necessary hardware plus assembly instructions. You will have to cut or buy your own correctly sized stripwood. Before you cut your wood to length it would be a good idea to plan ahead a bit and decide the final framing and placement of your stamp battery/ies. If you do not have your own stamp mill reference data then I would suggest you send to CHB Models for a set of stamp mill data sheets. This will give you several ideas on battery placement in a mill building and the proper framing for those arrangements.

At this point you should decide whether your model is to be static or operational. No, you will not be able to actually pulverize ore with an operating model (I sure hope someone takes me up on this) but the stamp is a great spot for interior detail action. If your stamp is to operate you must pay close attention to the battery post slots and parts alignment. Be sure to use a table saw or miter box with stops to properly cut the stem guide timber and cam bearing slots. If you

would rather not fuss with slot cutting then by all means use two properly dimensioned timbers to build up the battery posts. This method is prototypical, the ten stamp battery on display at the Western Museum of Mining and Industry in Colorado Springs is done this way.

Be sure to prestain, prepaint, and preblacken the wooden, cast metal, and brass parts before any assembly is done. You must also "core out" the holes in the stem guides and mortar box tops before these parts are attached to the model. For a static model core drill #52 (.063 inch) to allow insertion of the 1/16 inch brass rod stamp stem. An operating model will necessitate drilling the stem guides #49 (.073 inch) and the mortar box #48 (.076 inch) to be sure of enough operational clearance. You should also glue some type of metal "striker plate" into the mortar bottoms to give a heavier sound when your shafts drop. I used a piece of 1/8 inch keystick for this. Be sure to paint the mortar insides flat black and cut and blacken a piece of Kemtron screen to glue to the back of the mortar front frame.

Begin the stamp frame assembly by gluing the upper and lower stem guide timbers into the battery post slots using the stem guides as spacers. Be sure to predrill the battery posts .046

inch at the proper locations for the stem latch shaft. Place this assembly to dry, back side down, on a good flat surface using a small square to assure proper alignment. Next glue the mortar blocks together perhaps using file card or paper shims to achieve the proper 49-inch width. When the mortar block assemblies have dried, glue them between the bottoms of the battery posts, once again laying the assembly flat to dry. At this point it would be a good idea to drill the frame assembly for all those Grandt NBW's you are going to use. I used #C-16 on the upper buck staves where they attach to the mortar blocks; C-23's to attach the lower buck staves; C-23's on the upper and lower guide timbers to show attachment of the stem guides. You may wish to select different NBW castings, by all means do so as long as you choose an NBW that would do the job prototypically. Be sure to prepaint the NBW's before attaching them to the frame assembly. You may now glue the Brommer stem guide and mortar castings onto your frame, keeping a critical eye on alignment, especially so for an operating model. Use some of those blackened stamp stems you may have made and check for a nice free "drop" through the stem guides and mortars.

Once the castings have become firmly attached you may proceed to

place the stamp stems through the tappets. Place a piece of 5/32 inch stock into the empty cam shaft bearing slots and set the tappet bottom edge on this stock. Slide the stem through the tappet and bottom it in the mortar; the stem and the tappet will now be in proper relationship, use an ACC type adhesive to effect a sure bond. Once you have all ten stems glued to the tappets you are ready to set up and attach the cam shaft. I placed the bearings and cams onto the shaft in their proper relationship; note that the cams on the left bank of five stamps are located to the left of the stems and vice-versa for the right bank. Set up the side to side relationships by placing the cam shaft in its proper location on the stamp frame assembly. There are many different

drop orders for the stamps, I chose the order given in the Brommer data sheets. I drilled the cams for a tight fit on the 1/16 inch shaft, it was then a pretty simple matter to rotate the cams into the proper sequence. After double checking everything at least five times I dabbed ACC between the cams to hold them in place. This setting up of the drop order is critical on an operating model, the stamps should drop with a steady rhythm as the camshaft is rotated. On a static model this is not as critical, however, the cams should look right.

Place glue on the three bearing blocks and attach the camshaft assembly to the stamp frame, also attach the large wheel to the camshaft. Wait patiently for the adhesive to dry and then if your model was assembled

to operate—give it a try. Mine worked better than I had hoped, in fact the action of the cams on the tappet bottoms cause the stems to rotate in a prototypical manner. Add your final details, hook up a simple drive, and install the stamps in your mill.

The working model is quite a sight to behold, lots of action and lots of noise. Mount the mortar blocks to the top of some sort of sounding box under your mill and you will create a very busy little area on your layout. Build yourself about a thirty stamp mill and run a double-headed sound equipped consist down the mill spur. You will become suddenly aware of the cacophony that poured out of practically every valley in the turn-of-the-century hard rock mining areas of the U.S.

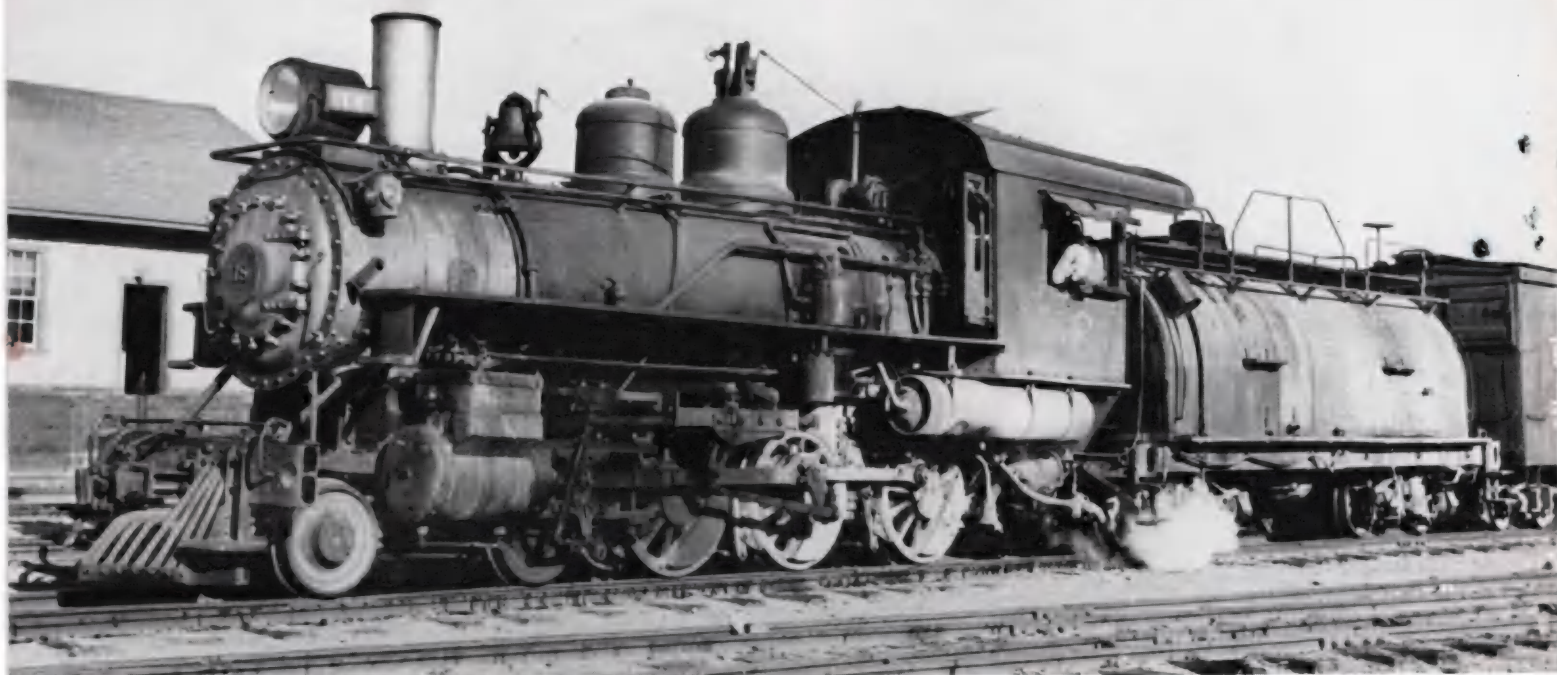


This photo shows the remains of a 40 stamp mill which processed gold ore for many years in the Galena Mining District of the Black Hills. The mill was originally part of a complex known originally as the Weber Mine. Notice the cams and the collars as well as the pulley wheel on the right hand side. *Photo by Scott Zieske.*



This close up view shows the hopper doors on a 40 stamp mill in the Galena Mining District of the Black Hills. Notice the maker's name on the hopper casting. *Photo by Scott Zieske.*

SHORT LINE and NARROW GAUGE RAILS, circa 1937



A Personal Narrative by Ted Wurm

Nevada. July 1937. HOT! All summers were hotter in those days, especially in Nevada. There was no air conditioning, but no one seemed to need it. You soon got used to the hot days and the Nevada mosquitos seemed to leave outsiders alone after the first few weeks. My dad's SP annual pass had taken me to Carson City for a low-pay summer job with relatives, and this was the perfect setup for a Virginia & Truckee RR watcher. This year I had planned to look into a couple of other treasures while I was over the hill.

After a week going wild over the goodies at Carson, I laid off for two days and went on a Monday afternoon to Reno and Sparks, where I shot a couple of 2-8-2's and other SP steam power. Southern Pacific mixed train 606, engine 2313, was due out of Reno at 6:55 that evening and I was aboard, riding the tail end car — coach 1200 complete with stove and conductor's desk. Up ahead were assorted tank cars, boxcars, and loaded stock cars. Heading eastward into the desert, we reached the "Junction Switch" at Hazen shortly before 9:00, turned southward past the diminutive engine-house and the switch for Fallon Branch. We were headed for the old Carson & Colorado line and the narrow gauge at Mina.

There wasn't much use trying to sleep. The coach windows were all open to catch any stray breezes and clouds of dust from the cattle cars filled the car as train 606 hit it up to 35 mph, limit for the branch. When we got to Wabuska at 11:40, I stepped out and watched our "meet" with Nevada Copper Belt RR railcar 22. There was much bustle as mail, express, newspapers, and one passenger for Yerington were transferred to the idling Hall-Scott car. By the time we were underway again, the village had probably gone back to sleep for another twelve hours. With switching to be done here and there along the way, no one seemed too concerned with timetable schedules. Yet, 40 minutes were made up after Wabuska and we reached Mina at 3 A.M., 171 miles and eight hours out of Reno. All I could see of the famed SP narrow gauge in the dim light from station lamps were cars 387 and 402. Most of my attention was focused on equipment of the fascinating Tonopah & Goldfield Railroad: hot lean, and dusty 2-8-0 #50, wearing her much-admired capped stack and standing by with combination car #2.

Soon The T&G mixed train (Tue., Thur., Sat.) was put together and the "Tonopah Express", as listed in SP's timetable, departed at 3:45 with 11 cars of freight and the coach-caboose. I had plenty of time to get acquainted with the interior of the car: a wood



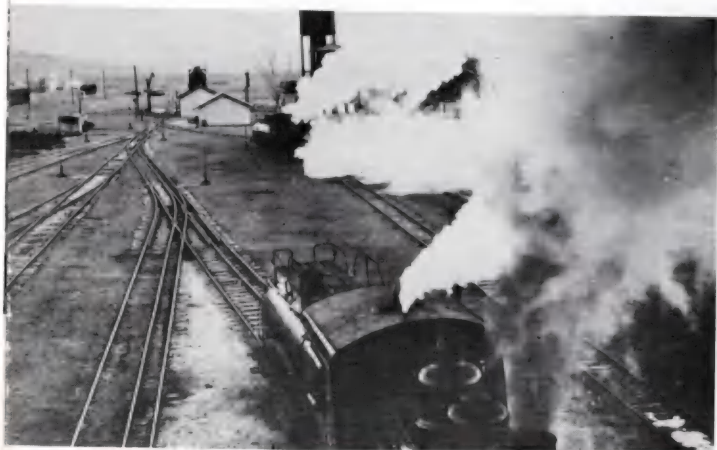
Mina, Nevada was the Southern Pacific junction with the narrow gauge for Keeler and with the Tonopah & Goldfield Railroad. Photo collection of Ted Wurm.



Tonopah & Goldfield #50, 2-8-0, with coach #2. Built by Baldwin in 1905. She has just arrived at Mina. Photo by Walt Young. Collection of Ted Wurm.



Tonopah & Goldfield #2 built by Pullman and used as a caboose combine. Photo by Ted Wurm.



Mina from the top of the engine house looking north. Photo, collection of T.L. Williamson, courtesy of Ted Wurm.



Tonopah & Goldfield M103 at the Tonopah station in 1939. It was painted green with a yellow and red front end. This car was originally from the Wheeling & Lake Erie. Photo by Ted Wurm.

stove, table for conductor, un-iced water cooler, very dusty seats. Occupants were the conductor and brakeman, a paying woman passenger, and me with a T&G trip pass.

For the first nine miles we rattled quite smoothly along the narrow-gauge right of way, using a third rail for our standard-gauge train. At Tonopah Junction the T&G turned off eastward across the desert landscape, which became bleakly visible as daylight gradually broke through the gloom. The sun followed shortly, almost straight ahead, and brought color to the stark Nevada mountain ranges on all sides. The last several miles to Tonopah appeared to be flat sagebrush desert, but they were by no means level. Engine 50 worked mightily climbing the sloping valley floor, pouring light smoke from her stack all the way, hitting perhaps 20 mph at best.

With a sigh of relief from #50 we at last reached Tonopah, center of what had been the last big mining boom of Nevada. It was 7:35 and we'd come 69 miles from Mina. There was switching to be done here and a meet with railcar M102. I grabbed a few "just in case" shots in rather poor light and trotted up the street for coffee and "sinkers" (donuts). Leaving town, I recall our train backing downhill a mile or two, catching the junction switch, and then scooting southward for Goldfield like a horse headed for the stable. Arrival time was 10:15 and I watched the spotting of a few cars and other movements until engine 50 was finally bedded down in the six-stall roundhouse. Also in the house and adjoining shop building were the rest of the attractive Baldwin 2-8-0s: engine 51, 52, 53, 56, and 57, along with railcar M103.



Tonopah station and office building. Photo by Ted Wurm.



Tonopah & Goldfield #51, 2-8-0 out of service in the Goldfield, Nevada roundhouse. Photo by Ted Wurm.

A couple of the locos were obviously unserviceable, apparently unmoved for many years. Very little activity was visible at the roundhouse, once the 50 had been put away, and I wandered around freely, getting a few time exposures, jotting down builder numbers, examining junky piles of artifacts that would be expensive trea-

asures today. Ten-wheelers 10 and 11 were nowhere to be seen, apparently scrapped (one of my "assignments" from the SF railfan circle had been to find this out).

When I photographed the deserted station of long-abandoned Bullfrog-Goldfield Railroad, all the rail interests of that semi-ghost town were covered.

I suddenly realized it was hot — close to 100 degrees — and there was nothing else for me to do until train time at 5:10 next morning. Bumming a ride in the back of a pickup, I got as far as Blair Junction, west of Tonopah, and there I was stranded for a couple of hours. I could imagine the aged 4-4-0's or the McKen car of Silver Peak Railroad coming up the broad valley to meet Tonopah & Goldfield trains at this point. But they were long gone — let's say almost as scarce as traffic on highway 95 in those years. Only three or four cars passed in two hours on that main road between Las Vegas and Reno.



Goldfield station at the end of the line (T&G) in 1937. Photo by Ted Wurm.



SP narrow gauge wrecker at Mina in 1937. Lettered derrick car #1. Later lettered SP 1 at Owenyo. Photo by Ted Wurm.



Narrow gauge flanger at Mina in 1937. Photo by Ted Wurm.

Finally I got a ride into Mina and it was getting late. I hurried into the SP yard area — the biggest area in town — and admired the large, rectangular enginehouse, about 250 feet long and containing 11 tracks or stalls. At the west end were standard-gauge service

ing areas; center tracks were three rail, and the three stalls at the east end were 36-inch gauge. SP ten-wheeler 2295 was inside, along with T&G motor M102; narrow-gauge #8 was farther down. I walked around the extensive, spread-out yard, snapping

pictures of narrow-gauge MW equipment in the fading light. There were scores of slim-gauge freight cars and many of the green passenger-train cars scattered about, but my dwindling supply of film necessitated making choices and I deemed the wrecking train cars most worthy of shooting.

SPNG #18 and #9 leaving Mina for Keeler at 7 A.M. on July 21, 1937. Photo by Ted Wurm.



Film about gone and only 80 cents in pocket, I decided to head for Reno and home. Why hang around? So I stood in the last light of day on the north end of the short main street — futilely as it turned out, and fortunately. Suddenly there was a rather close whistle to the south and I ran for the station in time to see train 611 arrive from Keeler, all beautiful narrow gauge from stem to stern. Ten-wheelers 18, 9, and 17 had 15 cars in tow. The 17 had left Keeler almost 12 hours before, meeting her helpers before the climb up Mt. Montgomery for the last 40 miles of her 160-mile run. Top speed on the SP narrow gauge was posted at 20 to 30 mph, so crews put in very long days on the full-line operation.

It was far too late for pictures, but now I was inspired to hang around until morning, knowing that the weekly southbound narrow-gauge train was scheduled out at 7 A.M. on Wednesdays. At the small general store I was fortunate to find two rolls of 616 film — 35¢ each — so I had 16 exposures to work with. Looking around for a place to sleep, I instinctively headed for the “coach yard”, climbed into one of the old narrow-gauge combos, and checked the seats. This old timer had seat backs that flipped up and over, so I balanced a couple of them up in the air and stretched over three scratchy plus seats.

wonder and a delight and this was one of the most interesting operations I would ever see. Laborers were busily transferring stuff between standard-gauge boxcars and their “baby brothers”. Boilermakers and fitters and machinists were working in the enginehouse, though I felt that this clean, elaborate structure seemed out of place serving a narrow-gauge operation. In fact, the SP at that time operated their narrow gauge just as if it were part of perhaps a secondary mainline, or fairly busy branch. The full facilities and services of the bustling big railroad simply spilled over and encompassed the 36-inch “little

18 returning light from her helper duty with the morning train over Montgomery Pass, then the highest pass on SP lines at 7120 feet.

By this time train 605 was made up and ready to begin her leisurely journey northward toward Reno. There were 28 cars in the train, with engines 2295 and 2344 on the head end and a handful of passengers and crew in the caboose-coach at the tail. Again, all coach windows were thrown open and I discovered that the water in *this* cooler was iced, providing welcome refreshment. We passed through one of those afternoon Nevada thunder showers, which cooled the air and settled dust stirred up by the freight cars ahead. The water cooler was empty long before we reached the mainline at Hazen.

Number 2295 cut off at Hazen, taking 11 cars with her and joining engines 2174 and 4010 on the siding. We continued west to Reno, eventually getting there three hours late at 10 P.M. In those days highway 395 for Carson headed out S. Virginia Street and you’d be out of the city in less than a mile. With my remaining dime I bought two donuts and started walking, making nearly four miles before getting a ride around midnight (few people picked up hitch-hikers at night in those days).

Two years later, August 1939, I visited Keeler, Goldfield, and Tonopah to shoot some of the equipment I had missed in 1937. Keeler was a great place for photos, since everything was stored outside and virtually every day was sunny. I still have the return portion of my Tonopah & Goldfield trip pass, thanks to refusing to wait over in that miserable, hot Goldfield one July day forty years ago. Was it THAT long ago?



An SPNG combine at Mina in 1937. Photo by Ted Wurm.

What a night! It was nice and quiet at Mina, but, mercy, what busy mosquitos! I was glad to amble over to the station around 3:00 to see train 606 arrive from the north: loco 2344 and 11 cars. The waiting T&G railcar stuffed itself with a couple of yawning passengers and three baggage truckloads of sacks and boxes and cans and bundles. It departed rather quietly just before 4:00.

I sat and dozed on my own baggage truck at the station until daylight, then walked across to the roundhouse where people were moving about and smoke issuing from a couple of tall stacks. Soon engines 9 and 18 were backed out into the brilliant morning sunlight and clear desert air. They put together a train from the transfer track area, picked up a caboose-coach from the three-rail storage track, got a clearance from the adjacent station, and headed south with 20 cars. Train 612, mixed, just a few minutes late.

So far it had been a very worthwhile wait at Mina. Watching narrow-gauge rail activity would always be a

brother” as well. Only the infrequent train operation gave a clue to its obsolescence.


As a matter of fact, it was just seven months later (February, 1938) that the last narrow-gauge train pulled out of Mina, taking with it all the small cars to their new headquarters at Keeler. Unfortunately, I could get pictures of only a small fraction of the equipment, with a few spare negatives of the locomotives for trading purposes. I could easily have shorted up 20 or 30 rolls of film in the car storage and work areas. An intriguing line in my notebook, recorded on that Wednesday, July 21, 1937, has left me puzzled in recent years: “Headlight of V&T 15 (seen) in house.”

Tonopah & Goldfield’s “San Francisco Passenger” reached Mina at 12:10, an hour late. But engines 50 and 57 were doubleheading with 28 cars, so it had been a busy seven-hour run from Goldfield. This put back the departure of SP train 605, so I was able to enjoy watching a further arrival from the south at 1:10: narrow-gauge

TIES - POLES

CHAIN - BARRELS

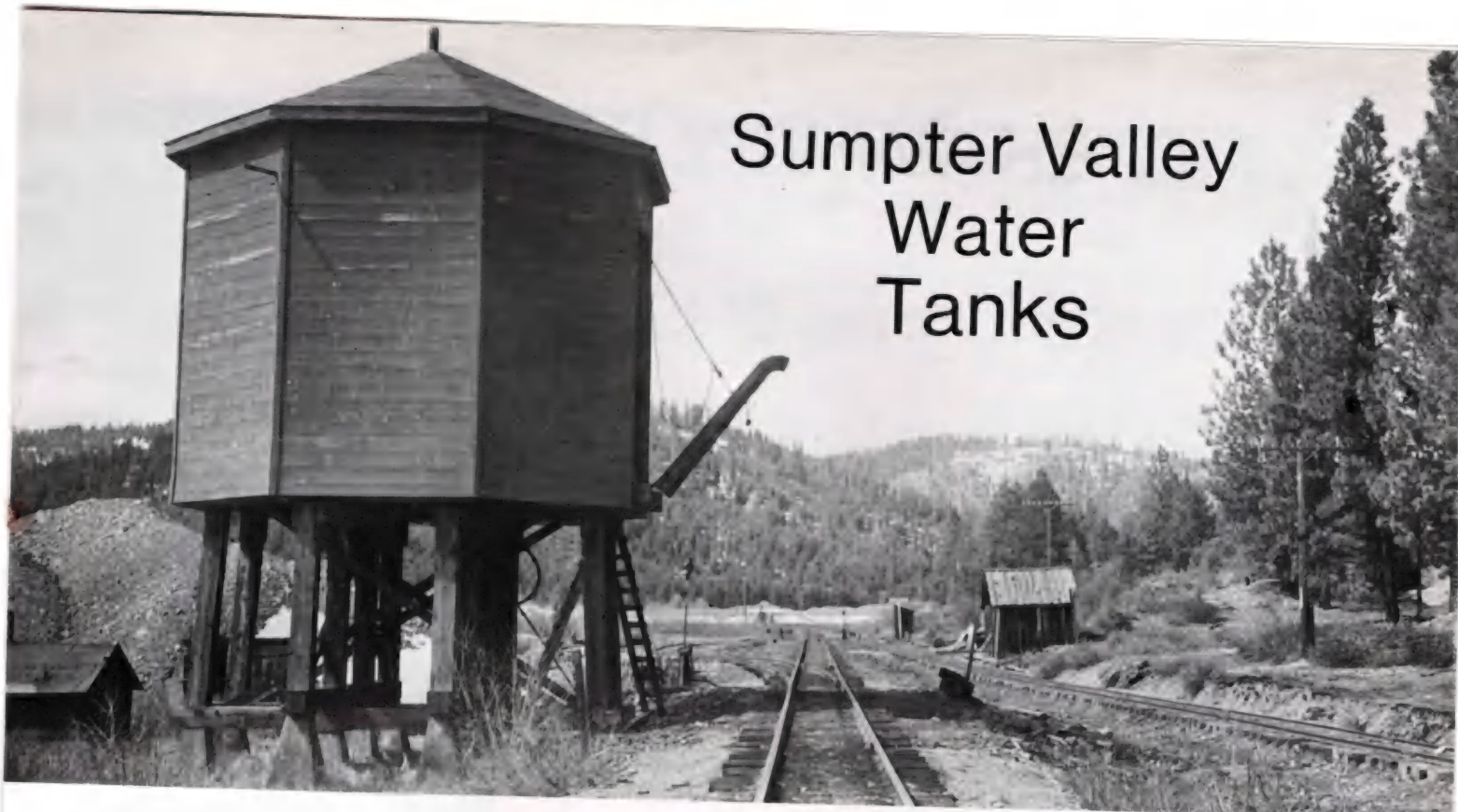
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LUMBER



Sumpter Valley Water Tanks

by Ron Harr

Between 1900 and 1920, the Sumpter Valley Railway acquired several new and larger engines and increased its traffic. During this period the management found that the older, smaller water towers were too small for the larger tender capacity of the newer engines.

The "Railroad Commission of Oregon Appraisal of 1909" described the original water tanks as being of wood construction with a capacity of 9,000 gallons. The tanks were 12 feet in diameter and were 12 feet high. By 1909 the tanks were depreciated 50% and carried a replacement value of \$399.78 each.

Between 1909 and August, 1916 the water tank at S-Wye was replaced with a larger tank, probably with 25,000 gallons capacity. Another 25,000 gallon tank was acquired in 1922. A letter from Continental Pipe Manufacturing Co., Portland, Oregon, received by Sumpter Valley Railway on June 9, 1922, quoted prices on three sizes of water tanks. On June 30, 1922, a bill of lading was stamped, "O.W.R.&N. Co., Agent, Kenton for one 18-foot diameter water tank being shipped to Baker, Oregon in freight car UP. 17478."

The majority of the smaller tanks were moved around to new locations along the logging lines. Two of these tanks were still in existence in 1965. All the larger tanks are gone, however



one large tank base is still standing at the location of Carroll siding.

Based on photographs today, the water tanks were of three different styles: straight, covered, and enclosed. The illustrations show the covered and enclosed styles. All known tower bases were different from that shown for the S. Wye tank. Two of the five 25,000 gallon tanks left standing in 1946 were completely enclosed (Whitney and Carroll). The other three were constructed similar to the S. Wye tank.

No two water tanks were built exactly the same. For example, the spout detail was enclosed on the S. Wye tank and exposed on the Austin tank. The freeze box and bracing also varied from tower to tower.

The Sumpter Valley Railway was known for its eight-sided water tanks. This one was located at S-Wye just east of Sumpter, Oregon. The photograph was taken in 1939. Photo by Henry R. Griffiths, Jr. Collection of George Hardy, Jr.

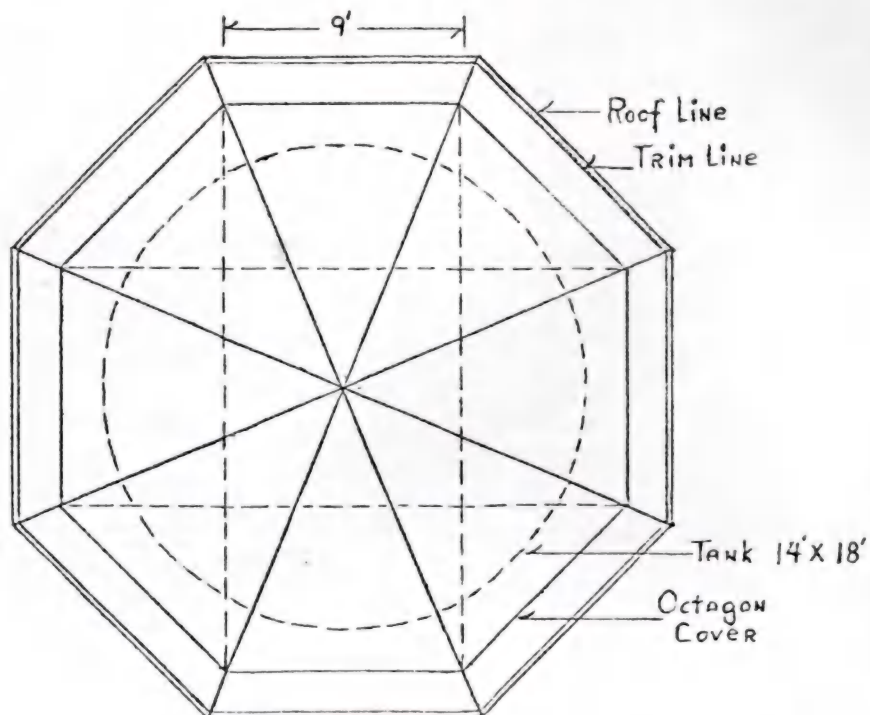
This HO scale water tank was built by Ron Harr. It uses the base from the Carroll Siding Sumpter Valley water tank and the tank from the S-Wye structure. Photo by George Hardy, Jr.

There were two smaller 9,000 gallon tanks used on the main line until 1946, the year of the last train on the Sumpter Valley Railway. These tanks were located at Bolder Gorge and Bates. In January 1976 the tank at Bates was donated to the Sumpter Valley Railroad Restoration Inc. Up until that time it was used as part of the water supply for the town of Bates.

If you are interested in supporting the restoration of Sumpter Valley Railroad, write to P.O. Box 548, Sumpter OR 97877. A history of the SV can be found in *Rails, Sagebrush and Pine*, by Mallory Hope Ferrell, Golden West Books, 1967.

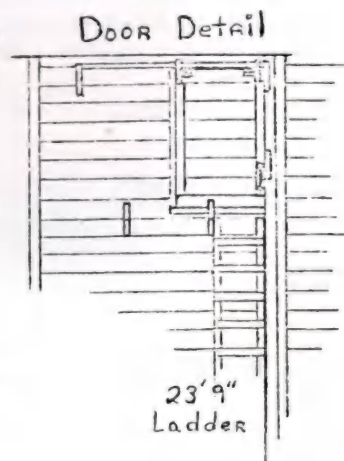
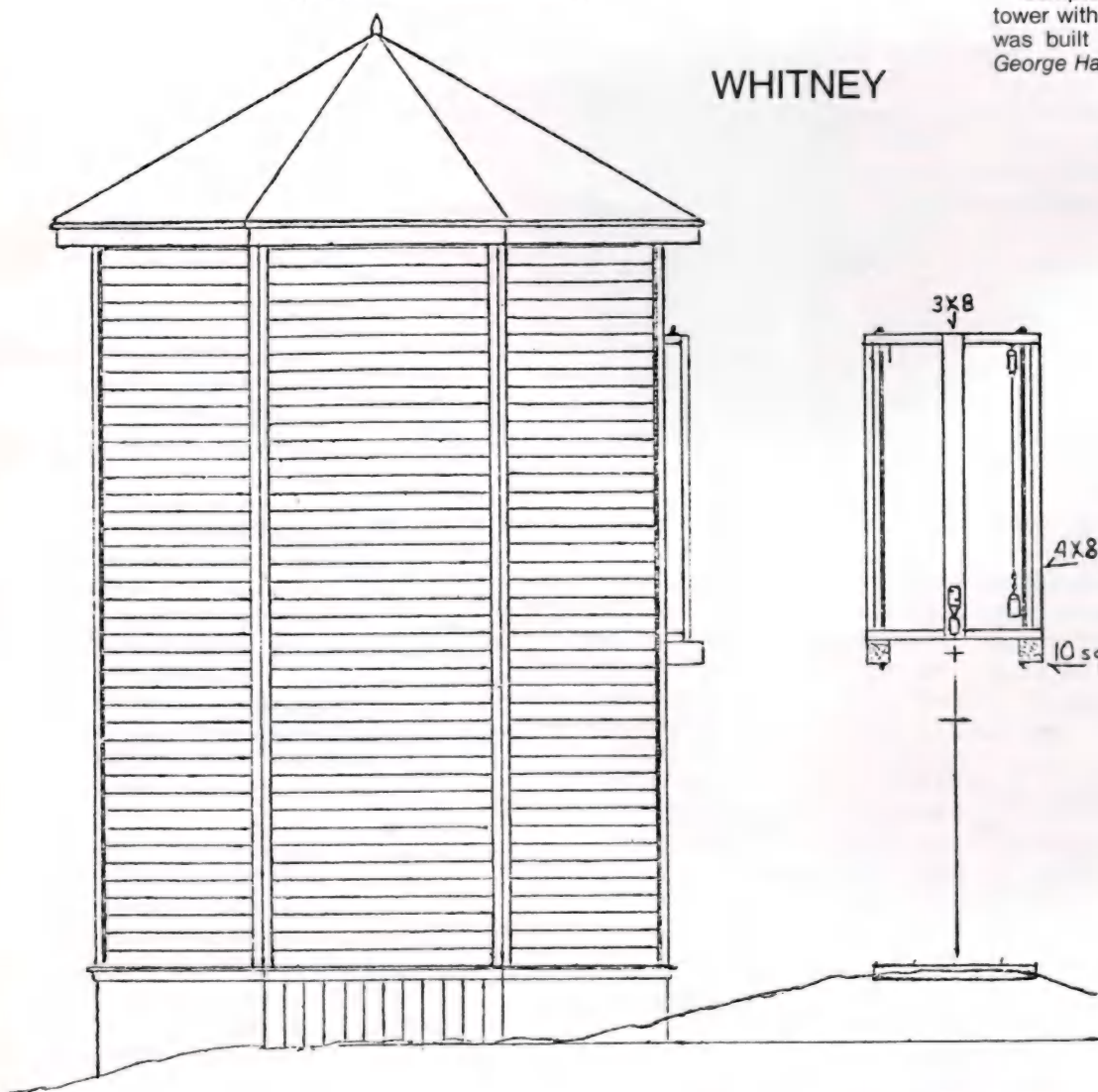
SUMPTER VALLEY RY.

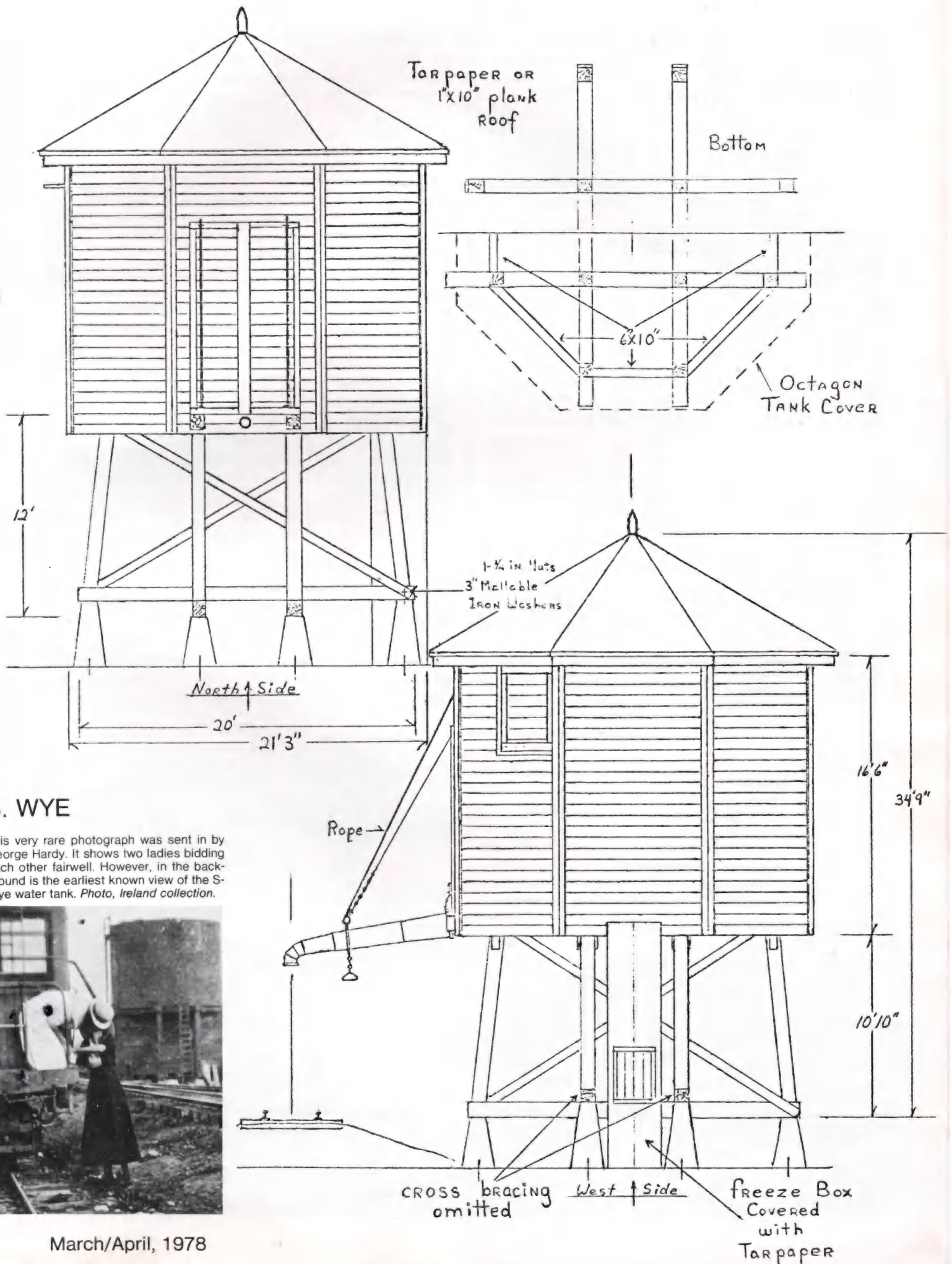
Scale: 3.5 mm = 1'
 Drawn by Ron Harr



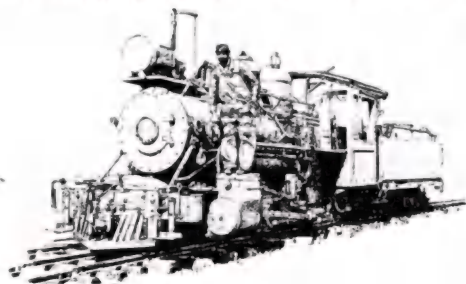
Sumpter Valley Railway, Whitney water tower with pump and wind mill. The tank was built in 1937. Photo, collection of George Hardy, Jr.

WHITNEY





NOTES FOR THE EXTREMELY NARROW-MINDED



by Bill Jensen

Last issue I took you on a short tour of Marbles. This month we'll move back down the line to Rangeley. For the modeler, Rangeley presents another yard plan that can be modeled "as is" or in a slightly modified form to get the flavor of the small town "dead end" yard. Rangeley saw very little bulk freight over the years and little activity other than at passenger train time. The majority of freight was for the less-than-carload shipment. Rangeley was and still is a town very dependent on the tourist trade. It bustles in the summer and hibernates in the winter.

In the late 1800's the region was largely dependent on timber products for its economic "base". Several Massachusetts business people purchased the timber rights to a large tract of timber land to the northeast of Rangeley at a spot that became known as Redington. Having no other means of getting their timber to market, the men decided that they would follow the lead of the builders of the Franklin & Megantic RR and would

build a railroad of their own to be known as the Phillips & Rangeley RR. The railroad was to be built primarily to serve the lumber company's mill at Redington. In early 1889 the petition to organize and build was granted by the State of Maine. By late 1890 the line had been graded and rail laid as far as Dead River station and the line had been graded to Rangeley. Work ceased for the winter of 1890, but early in 1891, as soon as the frost left the ground, the workers finished laying the rails into Rangeley. Meanwhile, the company work gangs had been busy building the "town" of Redington, setting up the mill and doing some preliminary forest cutting.

On June 11, 1891, a special inspection train was run from Phillips to Rangeley for the owners to see their completed line. On July 4, 1891, the P&R ran a special excursion train so the residents of the area could see the line, this train officially opened the line to business. In looking at the year's income sheets from 1891 and well into the early 1900's the amount of red ink spilled on the balance sheets was close to "flood tide" proportions.

A closer look at the "red ink" shows that the supposed losses were in fact "paper losses". The railroad was an operating portion of the lumber company interests and therefore the railroad "losses" were actually expenses for the lumber company. Little or no money ever changed hands from the lumber company to the railroad as payment for shipment of goods.

A further indication of the main interests of the owners was in the ini-

tial running of passenger trains. Although it was deemed necessary to run passenger trains, they were largely for the convenience of the lumbermen who worked for the company. By the late 1890's and into the 1900's this shifted somewhat as the timberlands were logged over and the line needed to find alternative means of getting income. Then the line paid more attention to the running of clean trains and equipment and the line settled in to stay.

During the early years, the operating headquarters were actually in the Redington Mill's office of the lumber company even though the line had offices in the north end of the Sandy River RR station in Phillips. By the early 1900's the lessening of timber traffic caused the operating people to "move" back to Phillips. Also with the lessening of traffic from timber the P&R began to take on the look of a "regular" railroad. Several "false front" railroad companies were set up by the P&R's owners to reach out into more virgin timber areas to increase the flow of traffic again. The Madrid RR and the Eustis RR were both built and did add significant car loadings to the income statement.

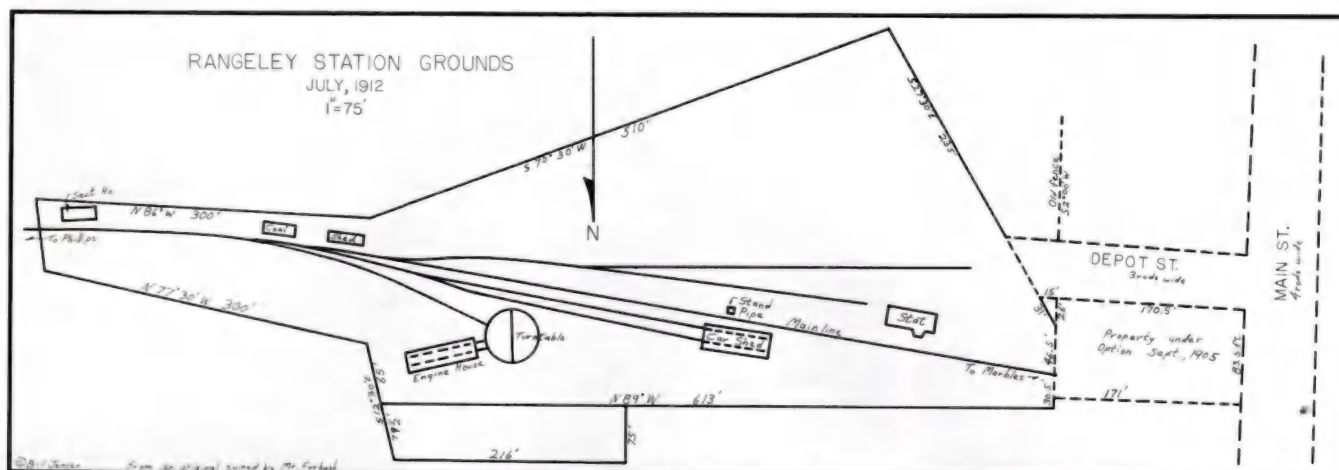
On December 4, 1903, the owners organized the Rangeley RR. This line was to extend from Rangeley, southwesterly along the shores of the Rangeley Lake chain to a connection with the Rumford Falls & Rangeley Lakes RR at Oquossoc. The "take-off" point was to be just north of Rangeley. This would have put the yards on a branch line. The petition drew some heavy fire from the Maxcy interests of the Sandy River RR which stood to lose some large portions of

This is the first known photo of the new engine house shortly after it was completed in 1918. The turntable was 49 feet in diameter and 10 feet wide. *Photo, collection of L. Brown.*



The second Rangeley depot in 1906. Note the changes being made to the platform as a result of the track relocation for the Marbles extension. *Photo, collection of R. Dole.*





the transfer business from the P&R. This argument was persuasive enough to cause the commissioners to turn down the petition of the P&R owners.

With the death of Calvin Putnam in 1906 the company faced some serious problems since the bulk of the stock was held by his estate. A receiver was appointed to look after the company and for a while things looked up. The problem was that the line had already begun to show real red ink due to the continued loss of timber traffic. Conditions proceeded "downhill" at a constant rate until the Maxcy interests from the Sandy River RR were able to buy up some \$10,000 worth of P&R receivers bonds. They promptly called the notes and the P&R came under the wing of the Sandy River RR for \$171,000. By this time, the Sandy River & Rangeley Lakes RR system was now nearly complete.

The next major change came in 1911 when the Maine Central RR bought the SR&RL. The MEC RR spent lots of money on advertising the benefits to vacationers of the Rangeley

Lakes area. Resulting passenger traffic was sufficient to continue to operate the now, Rangeley branch.

On October 2, 1917, the engine house at Rangeley burned, almost taking with it the nearly new SR&RL #10 and the older #21. Both engines were saved by spectators hauling the engines to safety by attaching cables to the engines and "muling" them out of the inferno. Although both engines suffered scorched roofs they were back in service after only a short period of repairs.

The Rangeley yard was never really "static" in arrangement. When first laid out, the yard had a two-stall engine house, a two-track car shed, and a covered depot. The 1912 map shows the general arrangement. The only change on this map from the original layout is that you can now see the second depot. I do not know when the covered depot disappeared, but it appears to have been in the 1890's.

My guess about the covered depot is that it burned since the second depot is built on the approximate site

of the first one. This second depot lasted until the late teens. The I.C.C. lists the third depot as being down on Main St. in 1916. This is in error since the age they give this depot is 14 years (based on 1916 Valuation Year) and at that age in 1916 it would have been built in 1902. One of the photos accompanying this article shows the 2nd depot and it was taken in 1906 when the mainline trackage was being relaid to get over the extension to the new Marbles depot. When that extension was being built it was necessary to relocate a portion of the depot's platform. The error is understandable when we realize the I.C.C. did its actual "on-site" inspection of the SR&RL in 1921. They thus had to back-date the information to 1916 which was to be the base year for all railroads. The third depot had already been built by 1921 and thus the I.C.C. measured the new depot and in back-dating to 1916 did not realize that the second depot had existed. The depreciation sheets for the railroad showed 14 years of accumulated

If the date on the back of this photo can be trusted the third depot was built sometime in 1917 or 1918. Photo, collection of R. Dole.



Phillips & Rangeley #4 sits with the morning train in 1907. The second Rangeley depot appears in the left edge of the photo. Photo, collection of B. Jensen.



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This late view of the yards shows the coal shed to the right, the engine house just peeking around the coal shed, the north end of the third Rangeley depot and the passenger car on the siding that was used as a bunk car for the section and layover crews. *Photo, collection of Ed Bond.*

depreciation for the depot and a natural mistake occurred. To compound the error the Maine Central did the necessary survey work of the right-of-way and the new depot was shown on the maps, so again the second depot was overlooked.

For the interested modeler, the second depot was: 45 feet long by 19 feet wide. The eaves were 10 feet above the ground and the peak was 20 feet above ground. The third depot was: passenger section (include office) 23 feet 6 inches wide by 29 feet long. Freight section: 87 feet long by 19 feet wide. This had two separate sections 25 feet and 62 feet long. Attached to the north end was an extra section used by the section crews for storage. It measured 19 feet by 19 feet.

The early engine house as seen in the 1912 map lasted until 1917 when it burned. It was 64 feet long by 20 feet wide. The tracks were 60 feet long. When it burned the new three-stall engine house was built, apparently in the next spring. The new engine house had stalls that were 50 feet long, with a front width of 14 feet 3 inches and a rear width of 22 feet 2

inches. The roof was 16 feet high at the front and sloped toward the rear down to 12 feet. By 1921, when the map was surveyed, the left stall had its track removed.

The car shed, 62 feet by 23 feet, was removed sometime between 1912 and 1921. No other information is available at this writing.

Rangeley offers the modeler a chance to model a water connection with boats by using the Marbles extension. The Rangeley yards were also on the southeast shore of a small pond or backwater of Rangeley Lake.

Next issue I intend to take you to the Bridgton & Harrison yard at Bridgton. I know this yard will be of interest to the fella wanting a very compact yard plan. For the Monson fan I'll be doing something on that line in the July issue. Probably I'll give you a view of the entire line and perhaps a more in depth coverage of Monson yard.

Narrow Mindedly,

Bill Jensen,
Coon Valley, WI 54623

This early photo of Rangeley shows the east side of the covered depot in the lower right hand corner. *Photo, collection of R. Dole.*



STRAIGHT

TALK

ABOUT

by Charles H. Givens

Let's leave those dirty old steam engines this month. Instead let's examine air brake equipment on other rolling stock. Until about 1934 all freight cars used simple and fairly uniform appearing air brake apparatus. Each car usually had the following:

1. Triple valve
2. Auxillary reservoir
3. Brake cylinder
4. Release valve
5. Angle cock and hose (on each end of car)
6. Retaining valve
7. Piping
8. Foundation brake rigging (the levers, rods and brakeshoes to apply the braking force)
9. A hand brake (usually on both ends on cabooses)

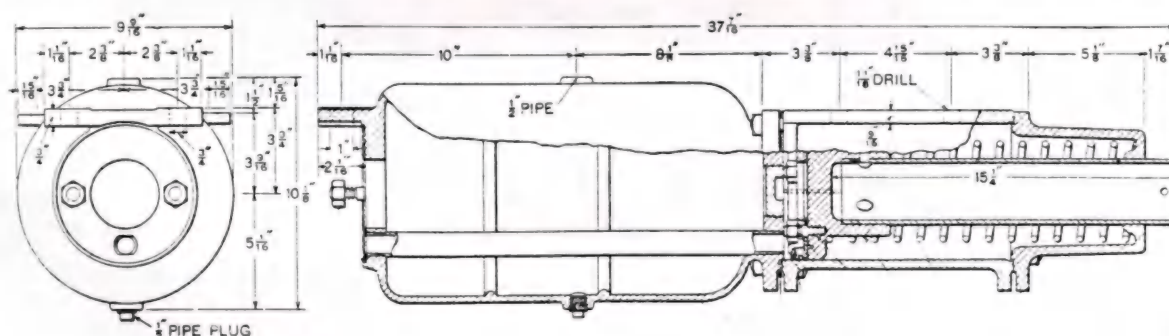
The old standard was HC and HD equipment introduced in 1887 using type-H triple valves, which was superseded by KC and KD equipment using type-K triple valves about 1906. The K triples are in use to this very day on Colorado narrow gauges and other operations, but were banned from ICC interchange right after World War II. As modelers we don't need to worry about the differences, as the H and K triples were visually identical, except for the cast-in letters on the valve body.

The HC and KC systems were built around the combined brake cylinder and cast iron auxillary reservoir

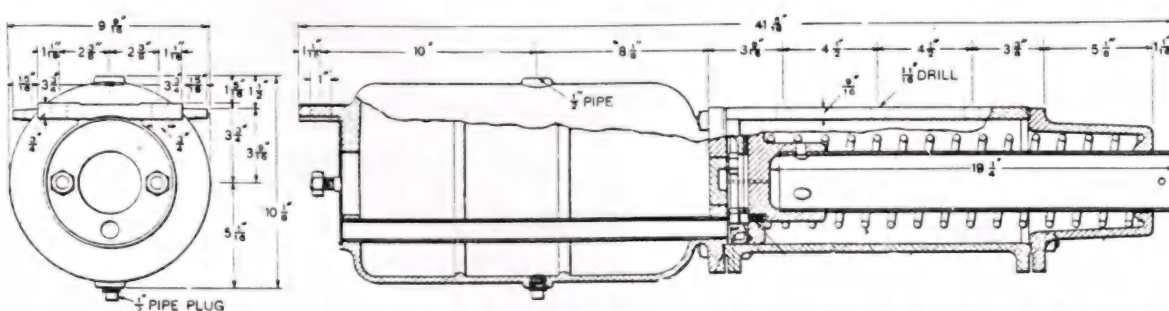
with the triple valve bolted on the reservoir end and the release valve screwed into the reservoir body. Thus all major air-operated parts were in one unit. Five brake cylinder sizes covered all sizes of rolling stock. These were 6" x 8", 6" x 12", 8" x 8", 8" x 12", and 10" x 12".

For cars (mainly hopper and ore cars) which had obstructions preventing use of the HC or KC types the HD (and later KD) detached type was available. This had a cast iron reservoir with the triple valve bolted on, but the brake cylinder was a separate piece to allow more convenient positioning of the parts.

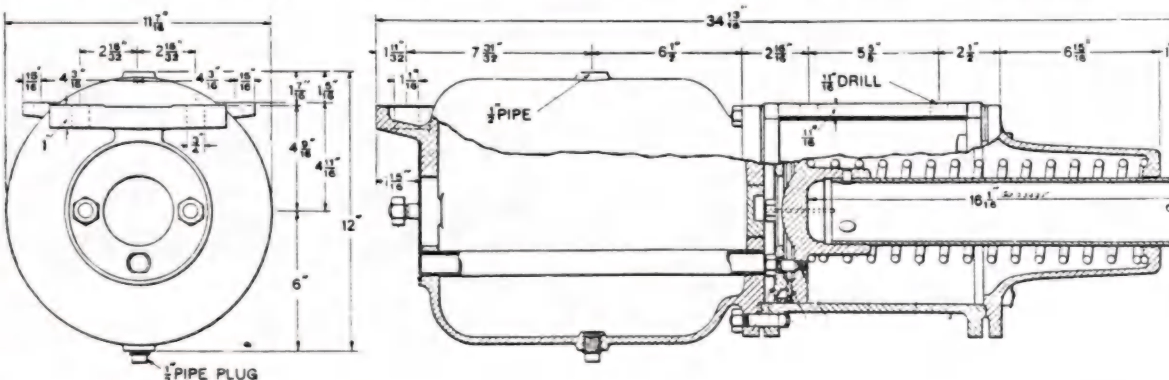
TYPE C (Combined) 6"x8" FREIGHT BRAKE CYLINDER AND RESERVOIR



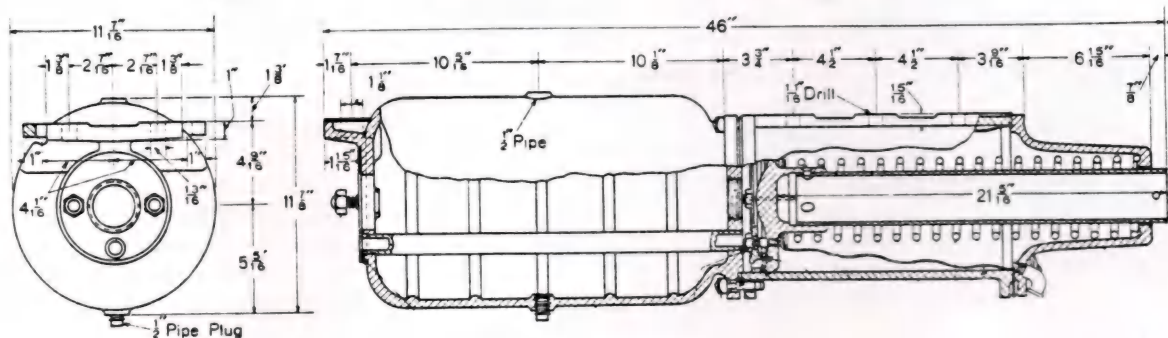
TYPE C (Combined) 6"x12" FREIGHT BRAKE CYLINDER AND RESERVOIR



TYPE C (Combined) 8"x8" FREIGHT BRAKE CYLINDER AND RESERVOIR

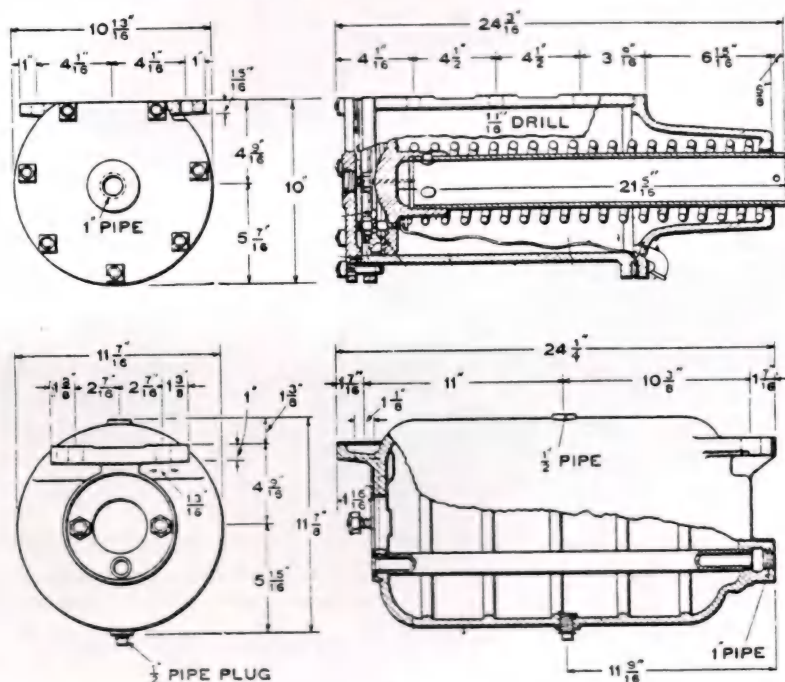


TYPE C (Combined) 8"x12" FREIGHT BRAKE CYLINDER AND RESERVOIR

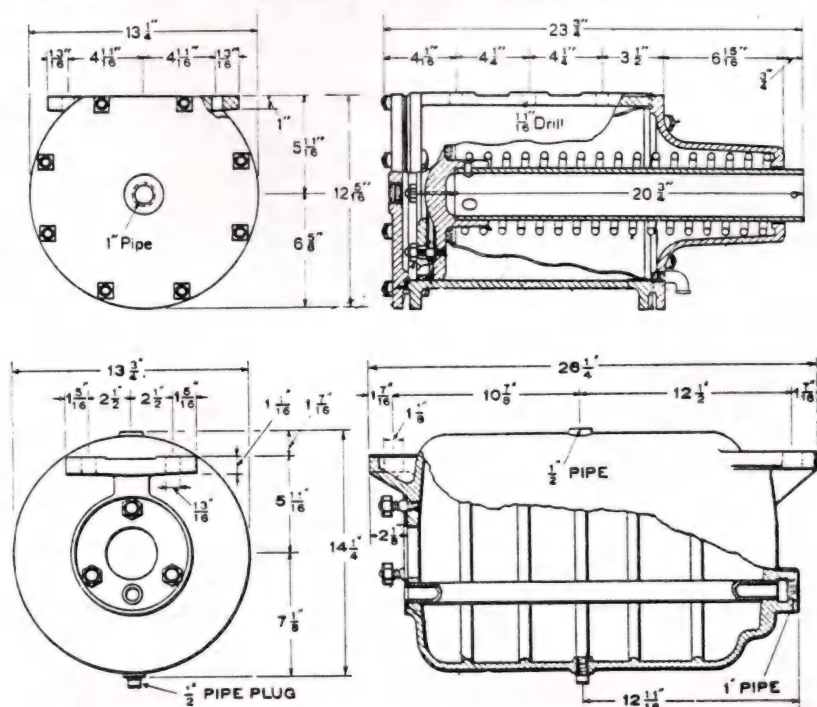


TYPE D (Detached) 8"x12" FREIGHT BRAKE CYLINDER AND RESERVOIR

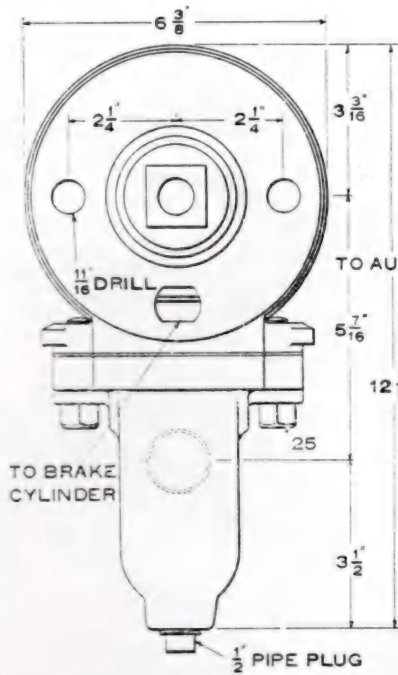
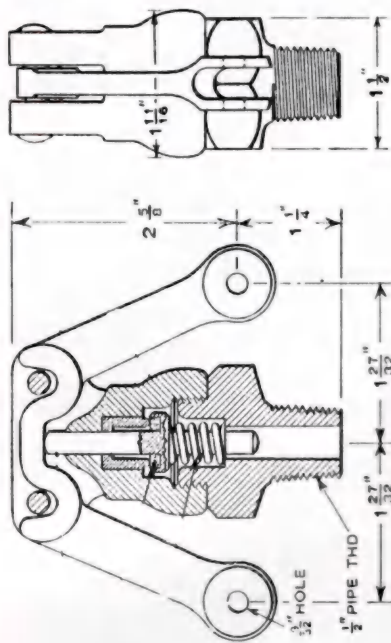
Illustrated here are four sizes of combined brake cylinder reservoirs and two sizes of detached brake cylinder reservoirs. Also presented are enlarged views of a triple valve and a reservoir release valve. Both triple valves and reservoir release valves are shown in place on each of the drawings of reservoirs; triple valves are attached to the left of the reservoirs, reservoir release valves are screwed into the bottom of each reservoir.



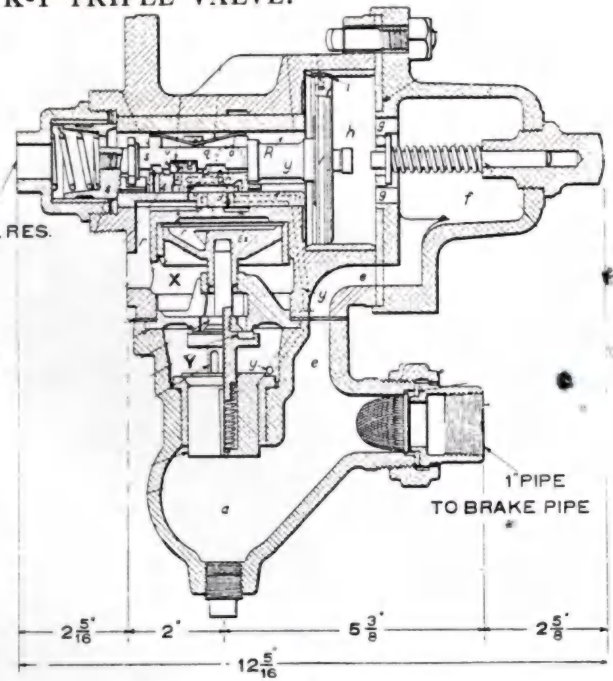
TYPE D (Detached) 10"x12" FREIGHT BRAKE CYLINDER AND RESERVOIR



RESERVOIR RELEASE VALVE.



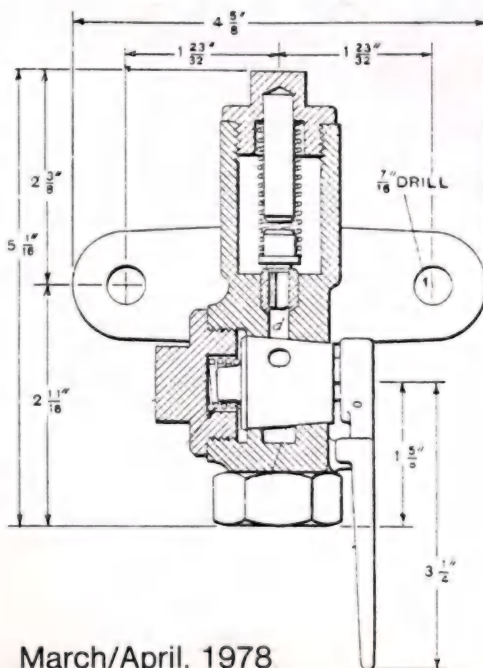
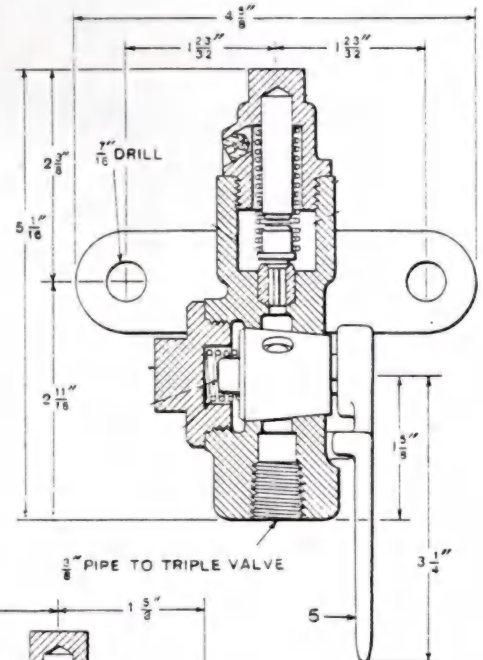
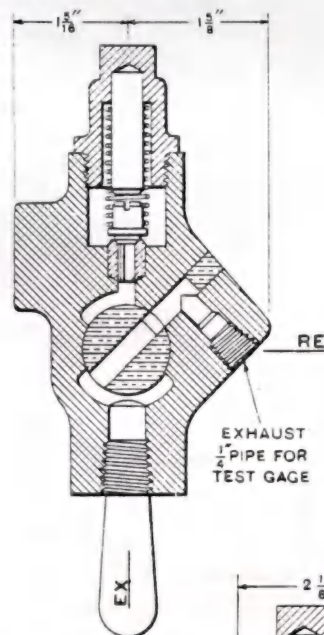
K-1 TRIPLE VALVE.



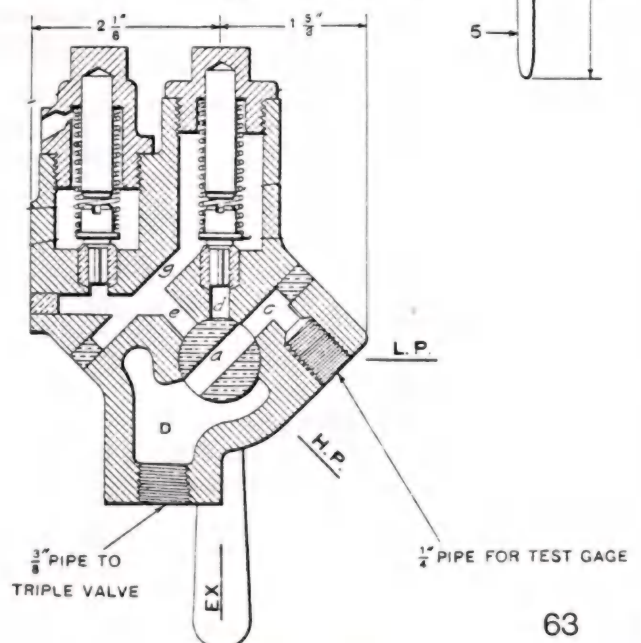
PRESSURE RETAINING VALVES
SINGLE PRESSURE SPRING TYPE

The retaining valve was always near the hand brake and many styles have been used over the years. This is one item that did change its visual shape several times. First came weight types, single and double pressure, followed by spring types, also single and double pressure types in several external appearances. Two types of pressure retaining valves are illustrated.

Air brakes on passenger cars will be discussed another time.



PRESSURE
RETAINING
VALVES
DOUBLE PRESSURE
SPRING TYPE





A water stop at Bennett's Creek. . . The hot, dry climate of the inland valleys is readily apparent here, with lighter green and yellow vegetation, and a considerable amount of dry grass. The trees, slightly different from the coastal variety, are intended to represent the Douglas Fir and Sugar Pines that abound in this area. They are made using techniques described by John Olson in the October, 1976, issue of **RAILROAD MODEL CRAFTSMAN**.

Scenery—Gazette Style

by Paul Scoles
Photos by Dave Menasco

Come on in...make yourself at home. Dave and I have been making bushes for awhile...care to join us? Recall from your last visit that we've been developing some forested areas along our coastal mountains. Well, now that almost all of the trees are in it's time to concentrate on what I consider the real key to a believable forest: Subtle blending of many different species of secondary growth such as deciduous trees, bushes and plants. Our choices of colors, species and amounts of secondary growth will

vary widely depending on the locale or climate modeled, and the time of year...obviously while the coniferous trees of northern California and Colorado will resemble each other (at least in model form), the amounts and colors of secondary growth used with those trees will clearly identify the region being modeled. Or at least...that'll be true if we concentrate and use as many photos of the actual locale that we can lay our hands on for reference.

OK...let's get started. We won't touch on deciduous trees just now (Gene Deimling did a fine job in the January **GAZETTE**), other than to say

that most of this type of tree I've used on my coastal hills were made from Woodland Scenics kits...several types and several shades of green. Tonight all we have to do is make some bushes and plant them, along with perhaps some vines and weeds.

First let's prepare some lichen...tear or cut small clumps of lichen to various sizes; say, ¼ inch to 1½ inch pieces. Now we'll stick them down to some masking tape laid sticky-side-up on a cardboard box. We'll do three or four dozen pieces at once to speed things along. Next spray the pieces of lichen...I like brown (light and dark), forest green, and sometimes grayish-

brown. The lichen is intended here to represent the branch structure of the bush so we need to color it appropriately. Once the paint has dried for a short while we can add the leaves. Working on two or three bushes at a time, spray them thoroughly with a flat spray varnish or spray varathane (spray glue or resin can also be used). Now quickly before the varnish dries sprinkle some fine ground sponge over them. Use more than one color on most bushes...but just vary the shades slightly. I use just about every shade of green and greenish-yellow offered by both Woodland Scenics and Architectural Models, leaning more toward the darker, richer greens for my "rain forest" along the coast, and the lighter, paler looking greens and yellows for the hot, dry inland valleys. For our "late spring" forest

along the coast we might also want to add some flowers to a few bushes...again good ol' Woodland Scenics makes a good looking assortment. Using the spray varnish just add some flowers very lightly over the green leaves already attached to the lichen.

Once we've made enough bushes we can plant them in our forest...use that razor blade to "slice" them off the masking tape. Pulling on them with tweezers or fingers will spoil their shape. Now just add some white glue to the bottom of each bush and set them in appropriate places. Use that pair of long forceps to reach in between the trees. While we're working in this area let's add some fallen logs (made from "Pride of Madeira" stalks), dead branches (from natural twigs), and perhaps some vines made from Woodland Scenics foliage mater-

ial. It's best here to use many slightly different shades of green, and make the secondary growth rather heavy if we are going to achieve the look we're after.

For drier climates or higher elevations we can use considerably less foliage and bushes, and lean more toward the light green and yellow ground sponges...as you'll notice over there where the track turns inland and crosses the coastal mountains. On the inland side the vegetation is much sparser and drier, and I've made extensive use of "dry grass" so common to inland California. Where's the dry grass come from...? Well, it's getting late, and besides, that's another story. Anyway, thanks for coming by... hope you can make it next time.

A thick grove of trees along the Klamath River, with a moderate amount of secondary growth added. Notice the numerous sponge-covered lichen bushes, fallen logs and branches, and smaller plants and weeds. This area is nearly complete.

As the track turns inland to cross the coastal range the trees and vegetation begin to thin out. Slightly lighter greens and warmer colors are used to subtly depict a slight climate change.

This split trunked tree grew on a hillside covered with scrub bushes and dry grass. The use of heavy or light amounts of secondary growth will clearly indicate the climate and region of a scene.





Michigan-California Lumber Shay #4 was in command of this string of Russel Pattern log cars back in September 1948. The train was on the line above the Cableway, headed for the mill at Pino Grande to load rough-cut lumber destined for Camino. Photographer, Ted Wurm, said that the brakeman standing on the front car had been sleeping on one of the cross beams! *Photo by Ted Wurm.*

Bill Adkins sent in this vintage photo of Rio Grande Western #272, a C-16 built by Baldwin in 1882. The Denver & Rio Grande Western leased a number of locomotives to the Rio Grande Western between 1889 and 1890 which gives us an approximate time period for this picture. The locomotive was photographed on the turntable at Pleasant Valley Junction, Utah. *Photo from the Utah State Historical Society.*



GAZETTE GALLERY

Edited by Gene Deimling



John Olson's Cielo Lumber Company 3-spot is hard at work on the mainline. The Shay is a modified import and the rest of the scene is scratchbuilt. *Photo by John Olson.*



It looks like those ominous clouds are closing in on Cielo Lumber Company's engine terminal located in the high Sierra. This superb photography and modeling is the work of John Olson. *Photo by John Olson.*

Don Beeman's fine layout will be featured as part of the tour during the Scale O National Convention (SONC 78). The convention will be on June 9, 10, & 11 at King of Prussia, PA. Information about this convention can be obtained from John Breuer, 40 W. 8th Street, Lansdale, PA 19446. The narrow gauge locomotive is a P.F.M. C&S 2-6-0. This scratchbuilt station is the focal point for interchange between Don's narrow and standard gauge lines. *Photo by David L. Waddington.*



This barrel car might be considered a forerunner of the modern-day high capacity freight car. The car belonged to A. Knabb & Company of Warren, Pennsylvania. It would make an interesting model. *Photo, collection of Benjamin F.G. Kline.*



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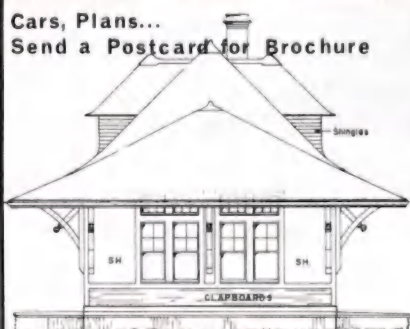
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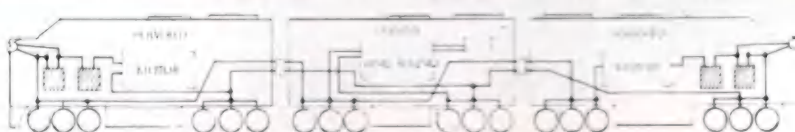
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BROADEN YOUR
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6401-UG Union Pacific Overland Sleeper Car

All HO Scale!



APRIL '78 ONLY

NEW Streamlined Passenger Cars from A.H.M.

A.H.M. presents two new color schemes in HO passenger cars— Union Pacific "Overland" and the Streamlined Santa Fe "Blue Goose".

The Santa Fe cars are finished in the matching color scheme of the famous 'Blue Goose'. You can now model the renowned 'Deluxe Super Chief', the passenger service that travelled between Los Angeles and Chicago for over ten years!

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1920 Series UNION PACIFIC 'Overland'

	Reg.	INTRO. OFFER
6202-UG Observation Car	10.98	7.77
6204-UG Diner Car	9.98	6.66
1930 Series U.P. "Overland"		
6401-UG Sleeper Car	9.98	6.66
6403-UG Railway Post Car	9.98	6.66
6404-UG Coach Car	9.98	6.66
6406-UG Duplex Sleeper Car	9.98	6.66
6407-UG Baggage Car	9.98	6.66

1930 Series SANTA FE 'Blue Goose'

	Reg.	INTRO. OFFER
6401-BG Sleeper Car	9.98	6.66
6402-BG Observation Car	10.98	7.77
6403-BG Railway Post Car	9.98	6.66
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6406-BG Duplex Sleeper Car	9.98	6.66
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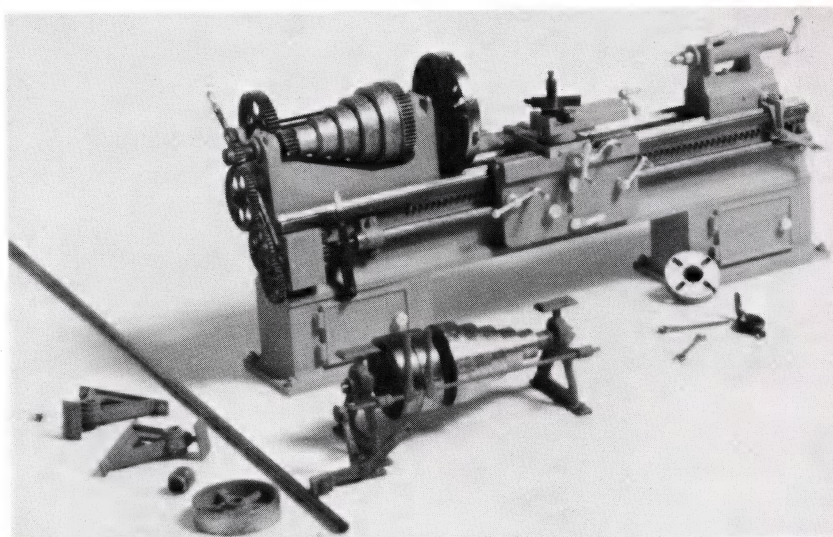
6402-BG Santa Fe 'Blue Goose' Observation Car

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DURANGO PRESS On3

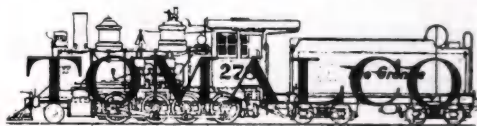
Westside Snow Plow \$44.95
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C-16 Modern Kit \$225.00
C-16 Original Kit \$225.00

Mail orders—Cash, check or Master Charge or Bank Americard. Number and expiration date required on Bank Cards.



D&RGW C-16, #223 in Sn3 by PFM - \$395.00

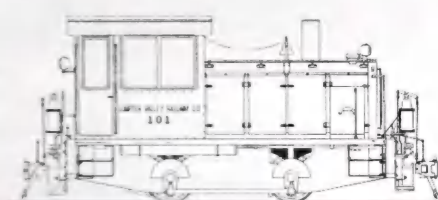
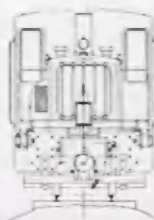
Available late Feb/early March, FLEX-TRACK in Sn3 by Tomalco. #70 n.s. rail in brown Delrin ties of variable length, width & spacing for that authentic narrow gauge look. Closest-to-scale possible "spike heads."



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JOHN LEWIS

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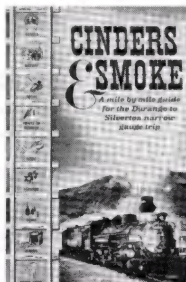
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GEM M&P #27 200 BAL C-16 185
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DSP&P 2-6-0 250 CB On3 Cab 90

FEATURING THIS MONTH

KEYSTONE "Danby Sawmill" in HO \$15.99

Send a SASE for the latest BUFF STUFF newsletter. This will keep you up to date on "Whatznu?" and our current prices. Also the remainder of our Brass inventory and sale items are covered in each edition.

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PFM:

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DRGW K-28 200 M&P 2-8-0 pt 200
NYC 4-8-4 200 GN 2-8-2 170
USRA 0-8-0 120 GN 0-8-0 300
SPTNO 4-4-0* 139 B&O 2-8-0 180

WSM:

C-16 #268 \$140 PRR Tool car \$75
C-25 SALE 140 K-27 Compound 150

NWSL

Moving Car \$20
N&W Dyno 59
4-4-2 125
4-4-0 HOn3 50

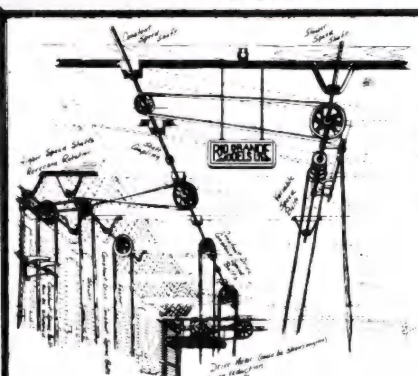
ASSORTED:

LMB C&O K-4 \$200 CB 4-6-0 \$130
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SUY IT "C" 150 CB On2 Comb 120
LAM PRR H-6s 195 NPP VGN Gon 21
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A companion kit for our new
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Set #BS-2 \$5.95

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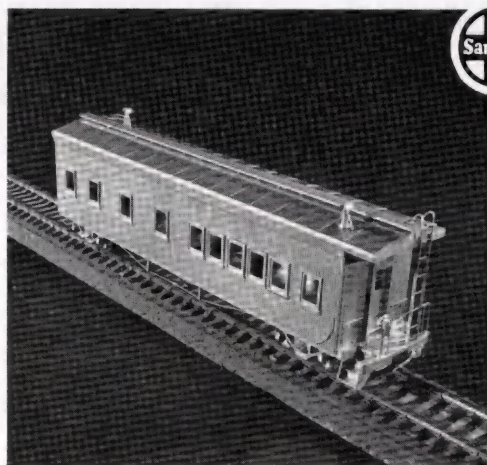
RGM add

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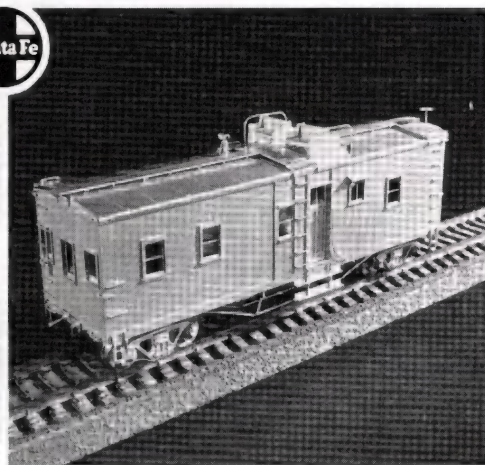
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The famous "Drover's Caboose" other-
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now available.



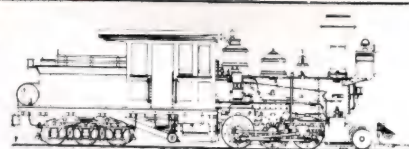
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Narrow-Gauge Traction!

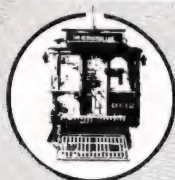
The Los Angeles Railway was THE narrow-gauge prototype system in its day—and its day was a long one! More than 1,100 cars, from dinkeys to streamliners, "Huntington Standards" to rail grinders, rolled the L.A. 3'6" rails.

Yes, these cars were classics, and interest in them today is growing by leaps and bounds. Read the whole story in

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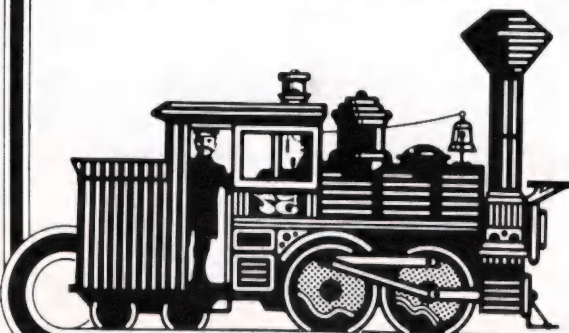


Light weight rail and scale weathered ties for the narrow gauge and short line modeler in HO or O scale. See your dealer or send SSAE for list of all track products, Micro Motors and gearheads.

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**3-7" CABOOSE
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4-0" As used on
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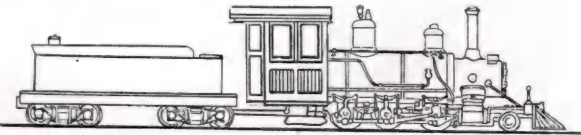
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HOn 2-1/2



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MDC-HOn3

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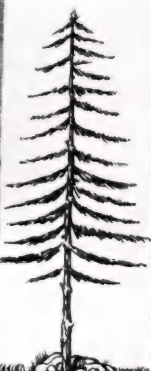
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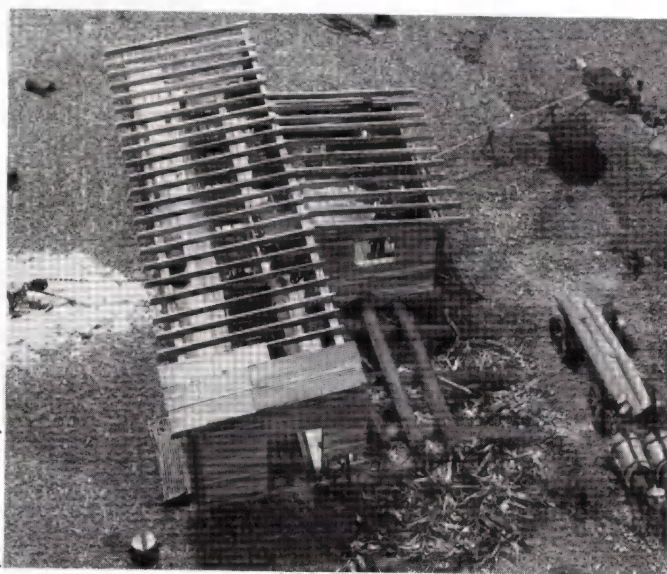
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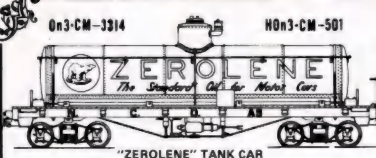


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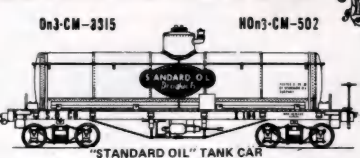
159 Wheatley ave.
Northumberland Pa. 17857



On3-CM-3314 HOn3-CM-501

"ZEROLENE" TANK CAR

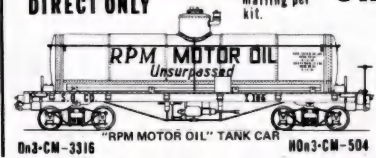
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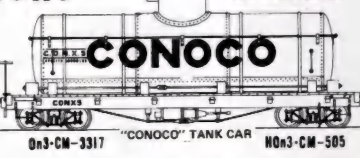
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HOn3 \$1625 with trucks
AT DEALERS



On3-CM-3316 HOn3-CM-504

"RPM MOTOR OIL" TANK CAR



On3-CM-3317 HOn3-CM-505

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Detailed History of SRR, SG&N & SN, 415 photos, 19 O scale plans, maps, 416 pp.

SILVERTON RAILROAD COS.—Sloan \$3.75
Slant history SRR•SG&N • SN, 13 HO plans, maps, 52 pp.

STRUCTURE OF THE OLD WEST—Crea & Bell \$4.95
20 HO plans, Mills, Mines, Depots, Tank, Coal Ramps, Stores etc. 60 pp.

BRASS PHOTO ENGRAVING

	HO	S	O
2 truck RGS Galloping Goose	\$15	\$20	\$30
3 truck RGS Galloping Goose (both bodies)	\$15	\$20	\$30
Silverton Northern "Cassey Jones" railbus	\$10	\$20	\$20
2 foot gauge Hinkley or Portland 0•4•4t	\$20		
2 foot gauge Baldwin 2•4•4•T B&SR6, SRRL8	\$20		
C&S S7-62, 63-70, 4-10 cabs & tenders	coming	coming	
D&RG 346, 318, T-12, C-21, RGS 20 cabs & tenders	coming	coming	

DECALS

	N	HO	S	O
Westside Lbr. Co. Locos & cars		\$2		\$4
Colorado Work Cars (white)		\$2		\$4
Pre-1906 Colo. Locos (mixed gold & white)	\$2	\$2	\$4	\$4
D&RG—Mears roads freight cars 1870-1921	\$2	\$2	\$4	\$4
South Park—C&S freight cars 1872-1942	\$2	\$2	\$4	\$4
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30 E. Pleasant Lake Road,
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A TINY MESSAGE ABOUT A TINY LOCOMOTIVE. The C.N. 60 Shay, an 8 ton, vertical boiler model that should finally be available this Fall, barring further complications. A very limited production, with unlimited fine detail castings, an exquisite model offered in HO and HOn3 gauges, HO scale.

NorthWest
Short Line

BOX 423 SEATTLE, WA. 98111

THREE FEET IS GREATER THAN FOUR FEET EIGHT AND ONEHALF INCHES THREE

3' > 4'8½"

This is about the time of year to clean out some of the old and bring in some new. If you have been looking for a particular model for some time, now is your chance to acquire it.

Motive Power is now a distributor for E&B Valley RR Co., RGS 0404 Caboose in HOn3 to be released at the latter part of this month. This is a corrected RGS caboose done by Moe Mechling on the drafting table. The Kit is of fine quality with the interior boards and sills included in the process and done in ABS. The standard applies to dealers.

On the binding service advertised in January RIP Track, don't hesitate on this one too long, as I have quotes from the Binder in lots of 60 to keep the cost at a minimum. It will surely keep your magazines in fine shape in the years to come, along with an ample supply of matching cover material for future volumes.

Have a good one and keep the comments coming. JOHN

★ March Special IHM on3 Baldwin 4.4.0 \$590
Narrow Gauge trades welcome. Call or write your needs. Better yet, call, terms considered. N.Y. residents add 7% sales tax.

Motive Power Equipment & Supply

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220.	HO WSM UN. PAC #7000 4-8-2—LATEST	169.95
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595.	On3 SUND&RGWK-28 #476 - 2-8-2	499.95

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DOUGLAS MODELS — SALT LAKE

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\$1.50 for 15 words or less, name and address free. Additional words 8¢ each. Must be paid in advance. Closing date is the first of the month preceding the month of publication. For example, the January/February issue is published about the 15th of January and the closing date is the first of December. The other closing dates are: Feb. 1 for Mar./Apr., Apr. 1 for May/Jun., Jun. 1 for July/Aug., Aug. 1 for Sept./Oct., Oct. 1 for Nov./Dec.

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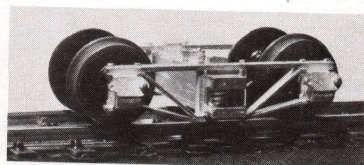
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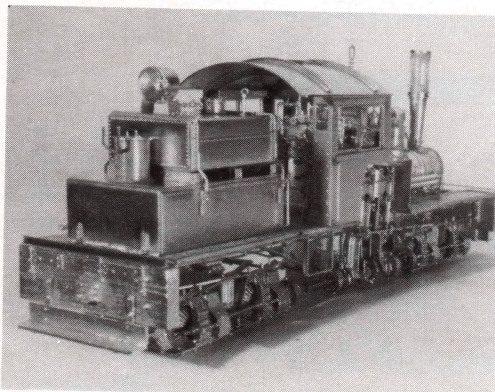
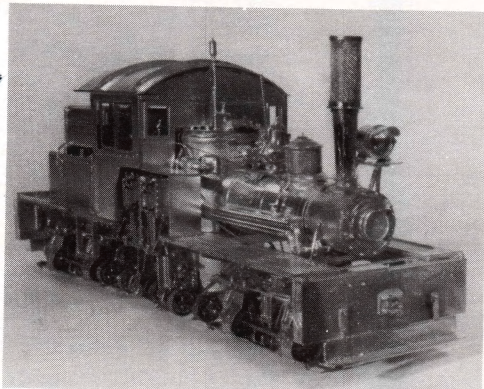
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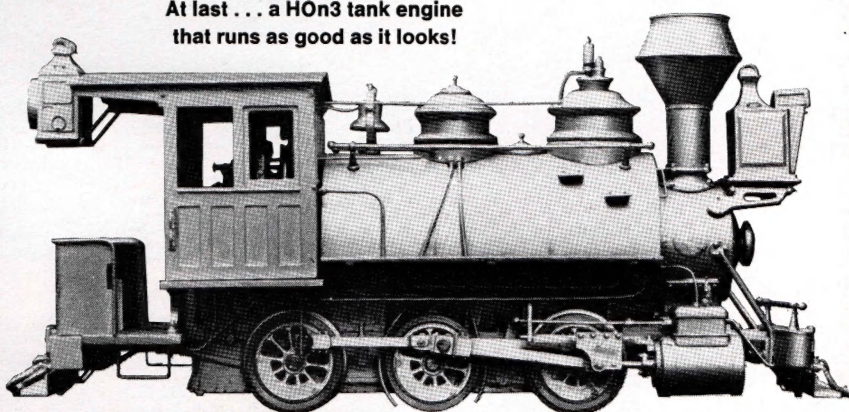
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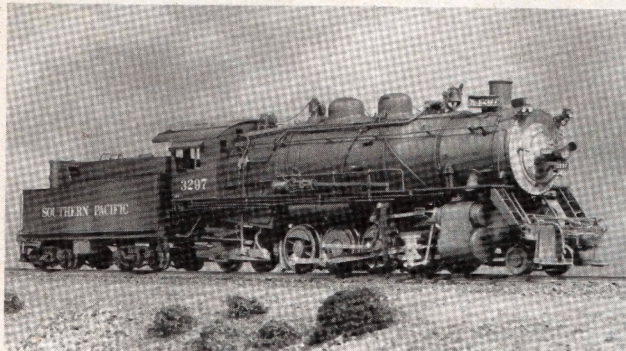
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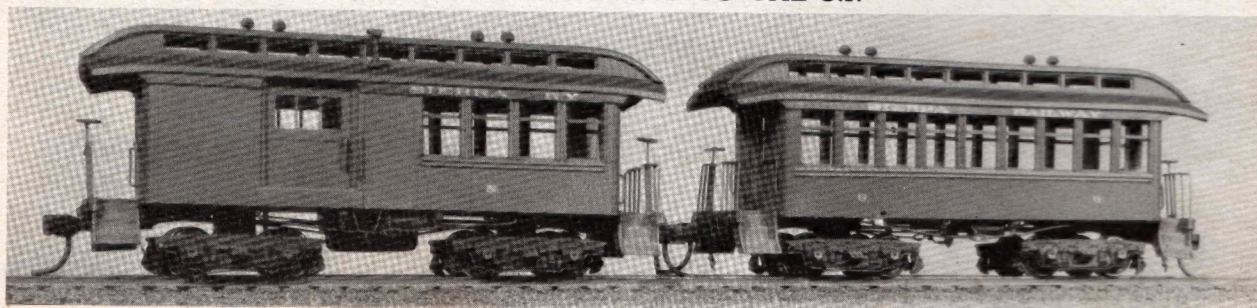
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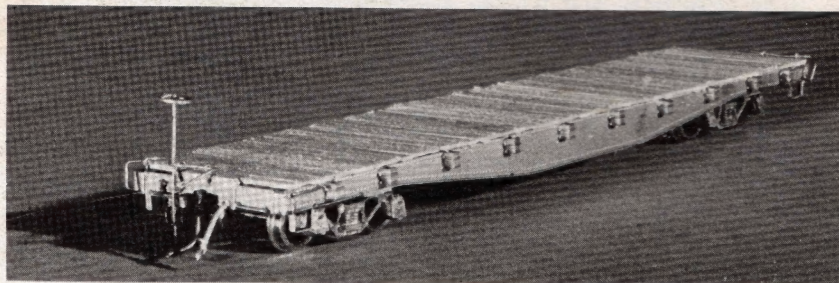


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